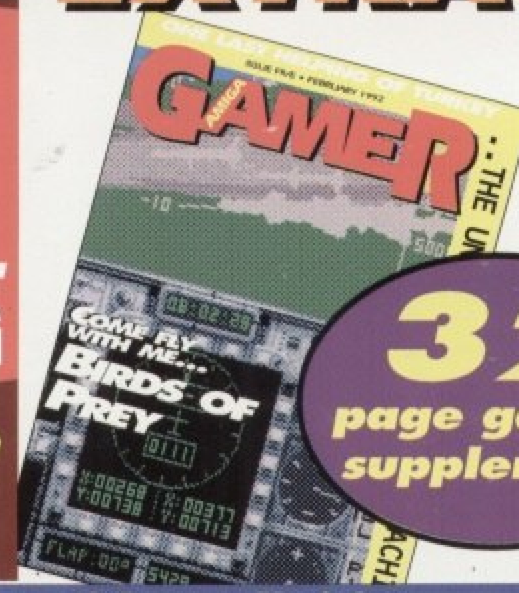
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Issue 45 • February 1992 • £2.99

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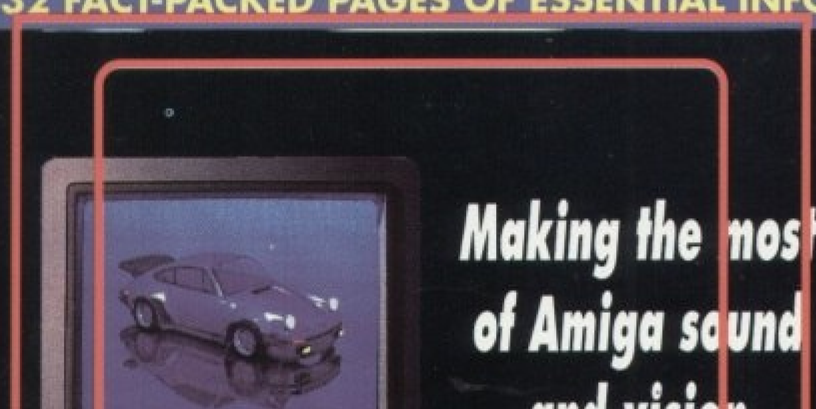
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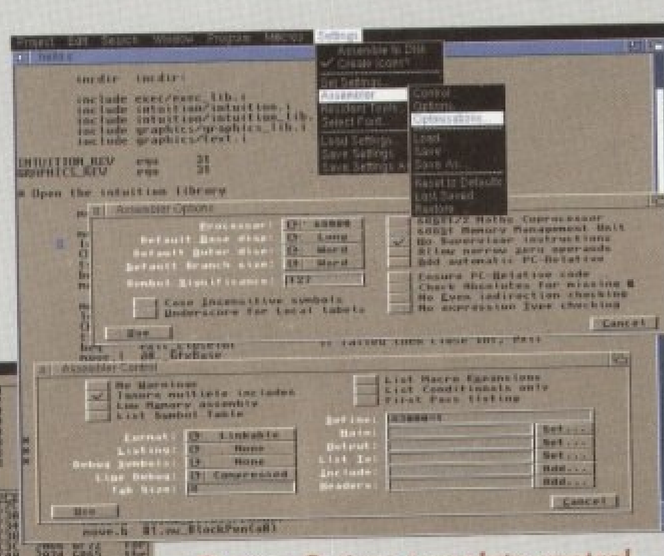
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Some things are worth waiting for ...

HiSoft Devpac 3

Devpac Version 3 is here at last. The two earlier versions of HiSoft Devpac for the Amiga set a standard in 68000 assembly language programming which was hard to surpass, but we think that we've done it. This new package has had a complete face-lift, from the editor through to the debugger; in fact so many features have been added and improved that we feel confident in the claim that Devpac 3 is the ultimate assembly language development system on the Amiga ... for now!



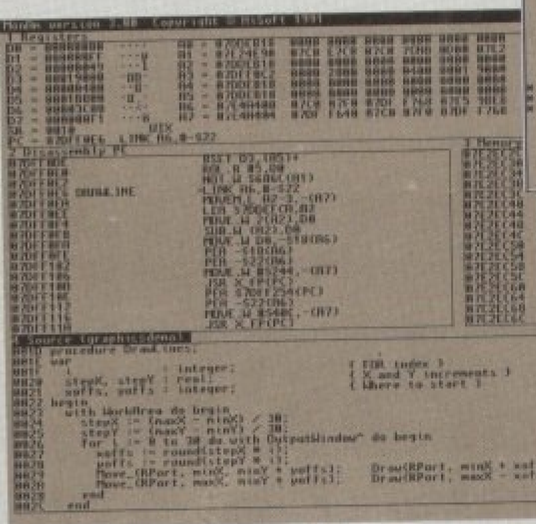
Devpac 3 gives complete control over the assembly process

The Editor

A new multi-window editor with bookmarks, mouse block-marking, macros, complete window flexibility (including multi-views on one file), extensive user configuration and full integration with the other Devpac programs. The editor makes use of Workbench 2 or 1.3 automatically.

The Assembler

Improved and extended, the Devpac 3 assembler is now at least 40% faster than its predecessor (without pre-assembly), supports the full 680x0 range of processors including the maths co-processors and has a tremendous number of switchable optimisations. With the ability to pre-assemble files for inclusion, it can now claim to be the fastest assembler on the Amiga.



the debugger supplied with both packages

The Debugger

Devpac 3 is provided with a versatile debugger/disassembler for bug hunting and ease of learning. You can have as many views on your program as you like, including its source code; then set breakpoints, single-step instructions etc. even at a source code level. Again, there is support for all the new processors and the floating point chips.

Devpac 3 comes complete with all the necessary include files, a linker, many examples and a clear, helpful manual.

HighSpeed Pascal



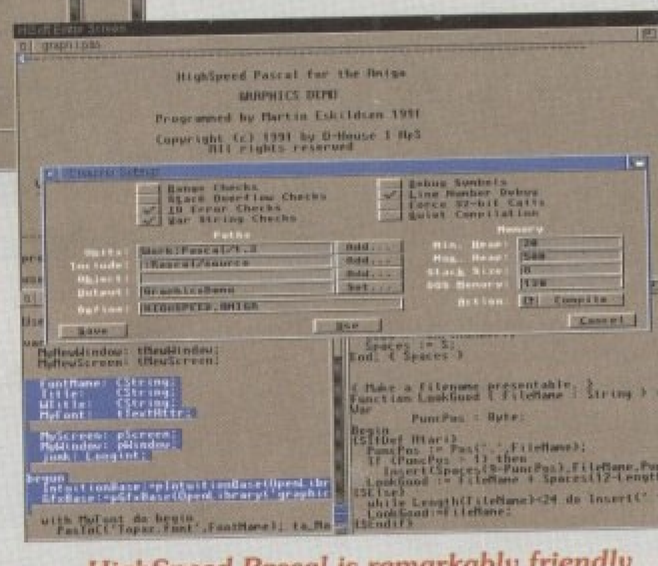
error detection is fully interactive

At last, a new Pascal compiler for your Amiga; HighSpeed Pascal. Compiling at close to 20 000 lines per minute on a humble A500 and with a fully integrated environment (based on the new HiSoft multi-window editor), HighSpeed Pascal is the answer to your programming prayers.

The compiler is very close to the standard set by Turbo Pascal 5 on the PC and enables you to port programs directly from the PC or ST - even the BGI unit is provided for graphic compatibility. You can compile separate units, link with assembler or use the inline assembler provided and we also supply a special version of our 680x0 debugger which allows you to debug Pascal programs at a source code level.

The full Pascal language is supported including such worthy additions as structured constants, flexible string handling and absolute variables.

HighSpeed Pascal comes complete with all the necessary files for working with the Amiga's operating system, a host of examples and a professional, ring-bound manual.



HighSpeed Pascal is remarkably friendly and easy-to-use

HiSoft Devpac 3 (£69.95) and HighSpeed Pascal (£99.95) should be in your local computer shop soon. If you have difficulty locating a copy, you can order directly from HiSoft using Access/Mastercard, Visa, UK debit card (Switch etc.) or a cheque/postal order. Mention this magazine when ordering to receive a free T-Shirt or mouse mat (offer subject to availability).

HiSoft Devpac 3 and HighSpeed Pascal are just two of the products that we supply for your Amiga. Other titles include: ProFlight, HiSoft BASIC, Extend, SAS/Lattice C 5 and HiSoft C. For more details contact us at - HiSoft, The Old School, Greenfield, Bedford MK45 5DE UK.

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AMIGA COMPUTING

FEBRUARY 1992

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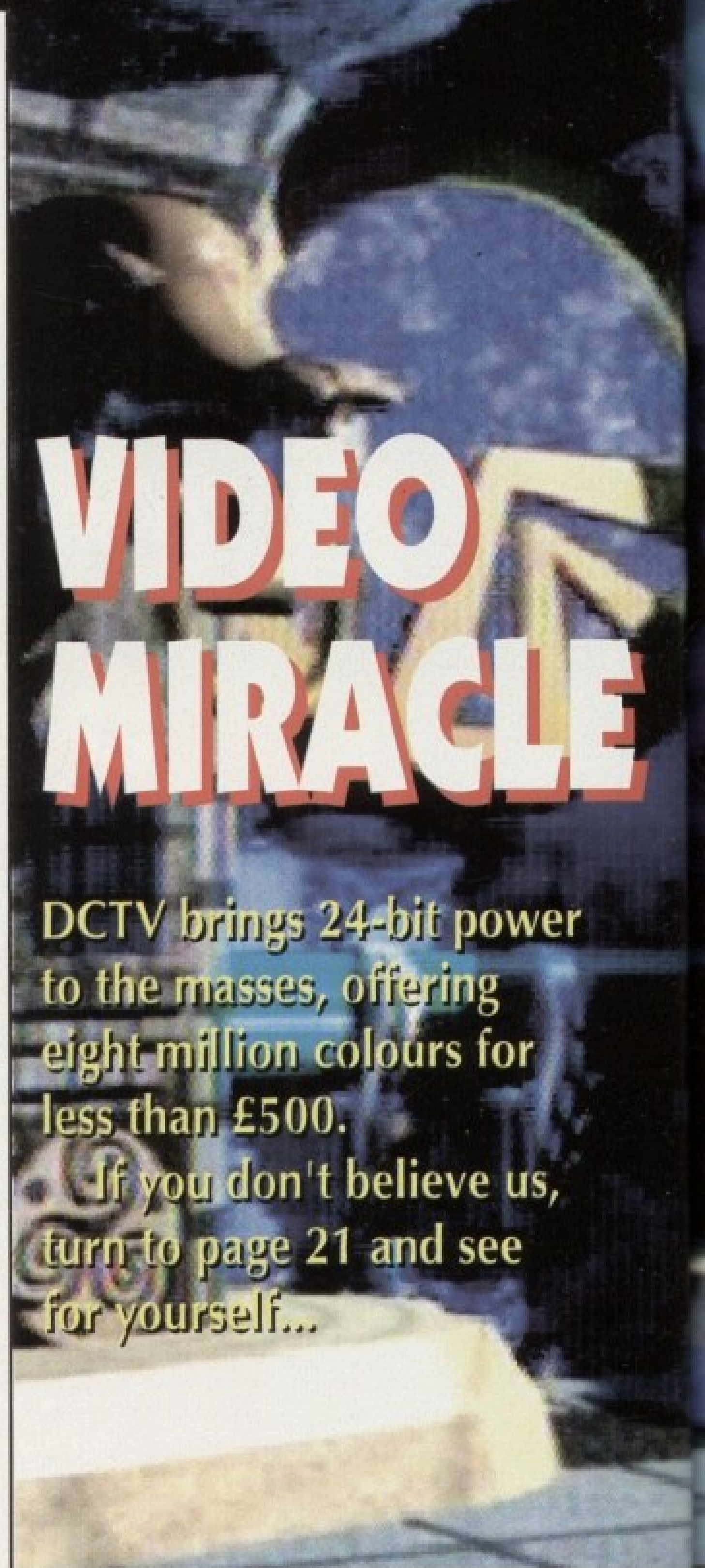
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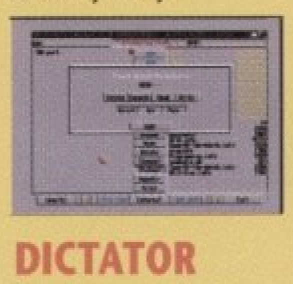
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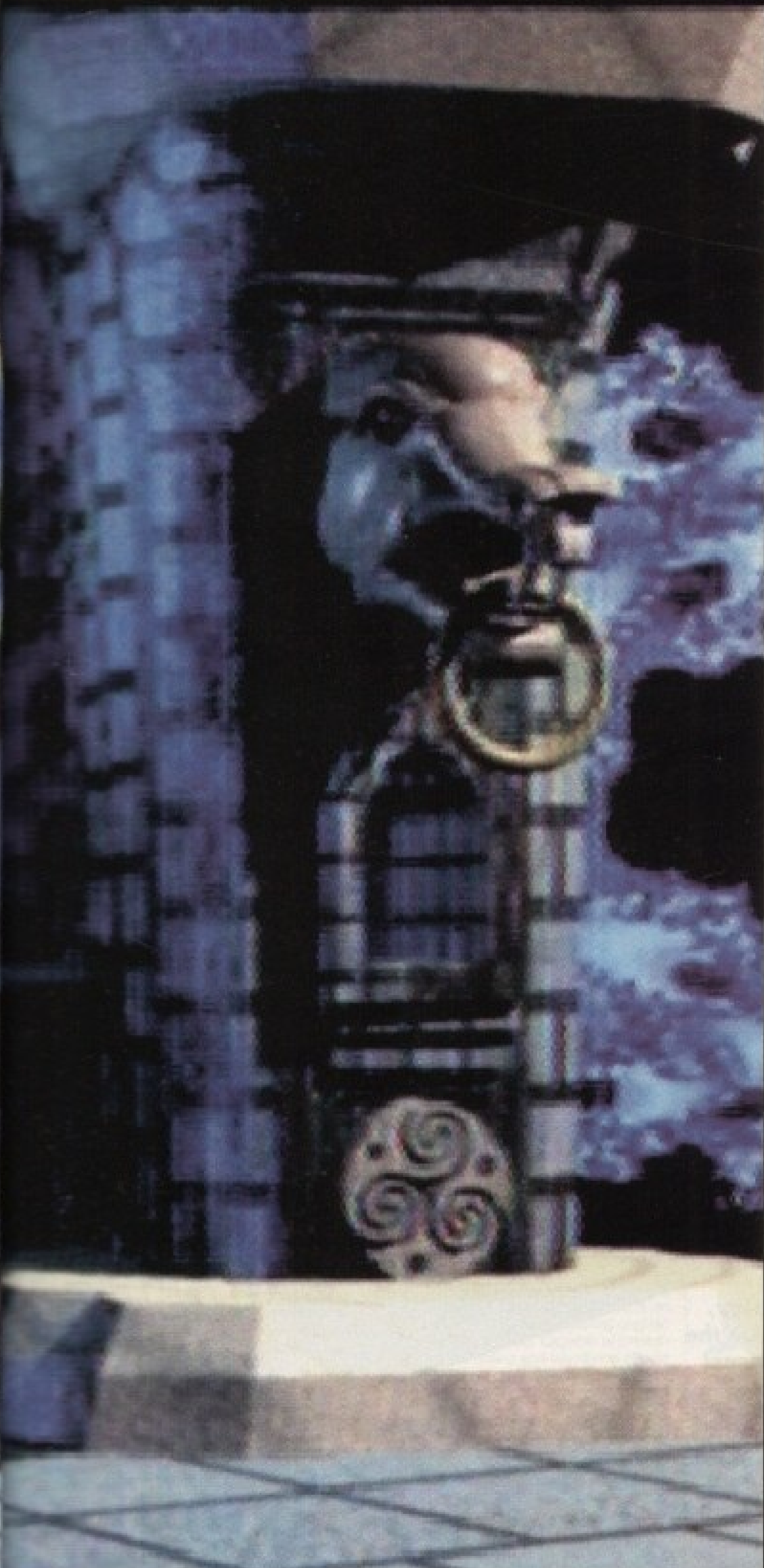
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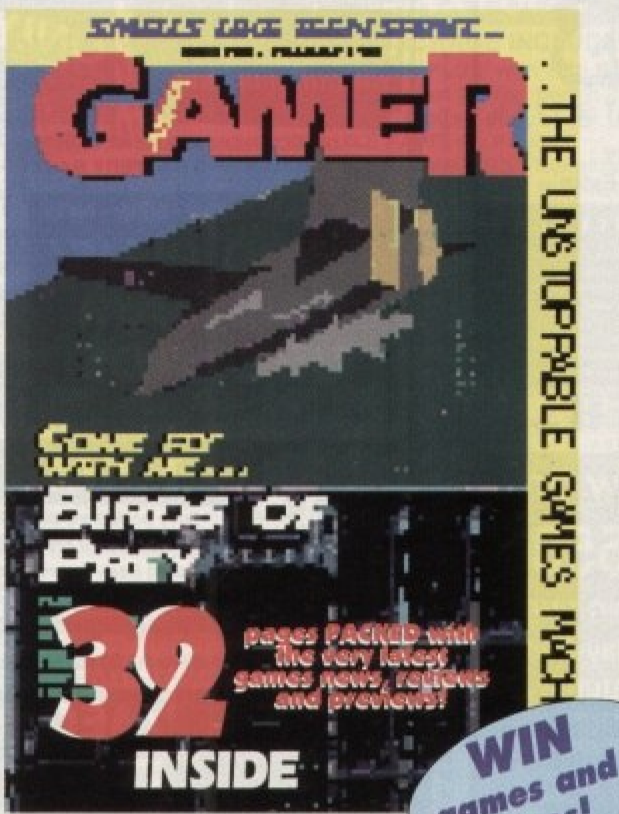
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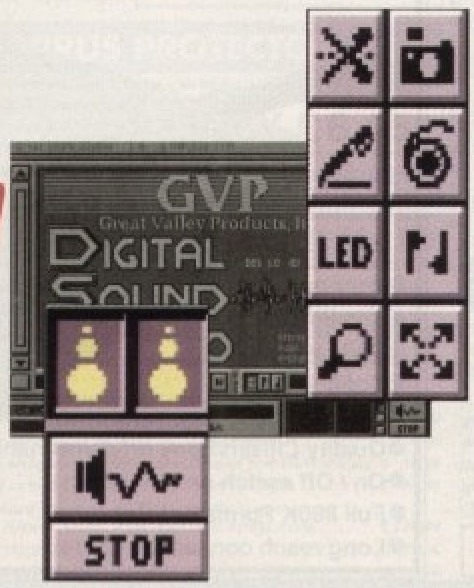


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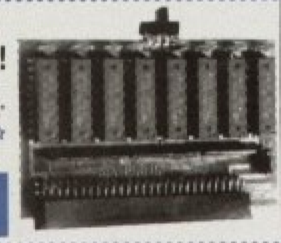
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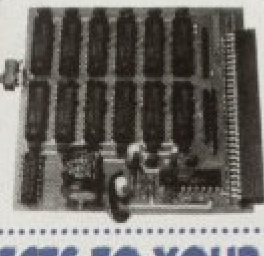


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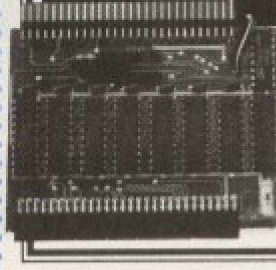
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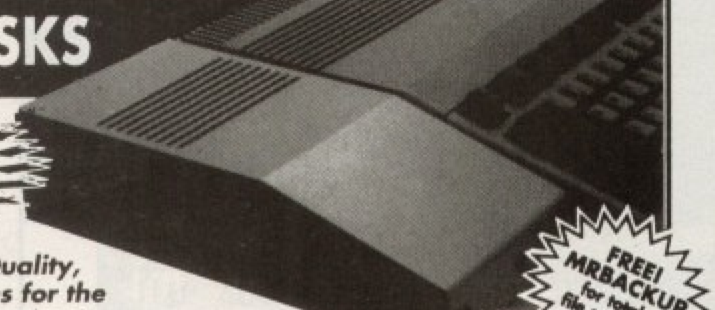
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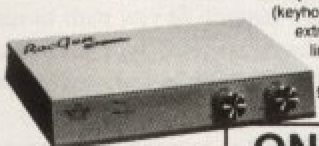
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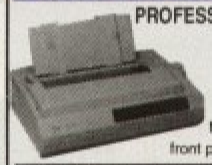


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A4000 - more amazing details

By John Butters

SINCE the exclusive report in our October issue outlining Commodore's plans to launch a new top-end Amiga during the next year, further details about its specifications have been gathered.

The machine will be named the Amiga 4000 and will be fitted with a 68040 processor, enabling the computer to run up to five times faster than the current 68030-based A3000.

It will have multi-monitor support and is claimed to have a 24-bit graphics board as standard, with 16-bit sound. The CD-ROM drive which has recently been rumoured for the A4000 appears not to have been included.

Experts now believe that a SCSI II interface will be included to enable information to be transferred at up to ten megabytes per second to and from hard drives.

Technology included in the "Super Amiga" is likely to mean that it will sell for between £4,000 and £5,000, and will be aimed at high-end graphics applications such as broadcasting, multimedia and presentations.

The A4000 could also be employed comfortably for computer-aided design or desktop publishing work, where it would operate faster than the industry-standard Apple Macintosh. Commodore refused to talk about the A4000's details, simply commenting: "We haven't got a release date for that machine, either in the UK or US."

CDTV linked with Amiga

IN A surprise marketing move, Commodore have backed down on their refusal to link the CDTV with the Amiga, the machine at the centre of the player.

It follows several months of the manufacturer going out of their way to distance CDTV from computers. They maintain that this was needed to attract people who would not consider buying a conventional computer.

CDTV, they said, was new technology because it could show text and music from compact discs. None of the firm's advertising mentioned the word computer and stores selling the player were forced to display it at least four feet away from computers.

Latest press and television advertising labels the machine Amiga CDTV, which one marketing expert said was needed because of "difficulties in explaining the multimedia concept and the undeniable cachet of the market-leading Amiga brand". It continues to be badged simply CDTV. Commodore's Andrew Ball said: "It seemed sensible to link CDTV with one of the strongest names in home entertainment.

"CDTV was always going to be launched in several stages – its potential is far greater than any games playing machine."

He added that the firm have spent money educating people about CDTV's abilities and thought that recent promotions on Radio 1 and coverage on BBC television's *Tomorrow's World* programme had helped the campaign.

By mid-December Commodore had sold 8,000 machines through to consumers and the company expects total UK sales to stand at 30,000 by the end of the Christmas selling period.

Meanwhile, two more High Street chains have taken the machine on board. Dixons and Comet are to stock it at more than 30 stores each and it is to enter about 100 independents.

The CDTV – sorry, the Amiga CDTV

Sales exceed three million

WORLDWIDE sales of the Amiga reached three million during the last couple of months of 1991, Commodore have announced.

A million machines were sold during the year, and total sales for the UK alone are predicted to pass the million mark early this year. The giant says that the Amiga's use in home computing, education, leisure and professional markets make it unique in the UK market place.

Commodore UK boss Steve Franklin enthused: "Actions speak louder than words. Right now I doubt there is any other computer which can equal the growth of the Amiga.

"This is an astonishing display of strength, especially during a worldwide recession, and 1992 promises to be even better," he added.

Classic bundle planned

THERE is growing speculation that Commodore are to release an Amiga 800 Classic bundle in the near future, containing a computer, hard disk drive and monitor.

Reports suggest that the A800 is to be powered from a 68020 processor and all the elements will be cased together, in a similar way to the Apple Macintosh Classic. The machine will also have 16-channel sound, says a source.

Industry newspaper *Computer Trade Weekly* has added weight to the rumour, claiming that the Amiga family is to be increased this year with a machine to fill the gap between the A500P and A1500. No other details were given.

A spokesman for Commodore said he was unaware of the bundle and added it was certainly not a product they were considering releasing in the UK.

Multimedia packs go with A3000

PEOPLE buying A3000s now get three multimedia tools supplied with the machine at no extra cost, making it more attractive to creative businesses or single media producers.

The packages included are Scala, AmigaVision and Deluxe Paint IV. Commodore consider all of them to be ideal for multimedia applications.

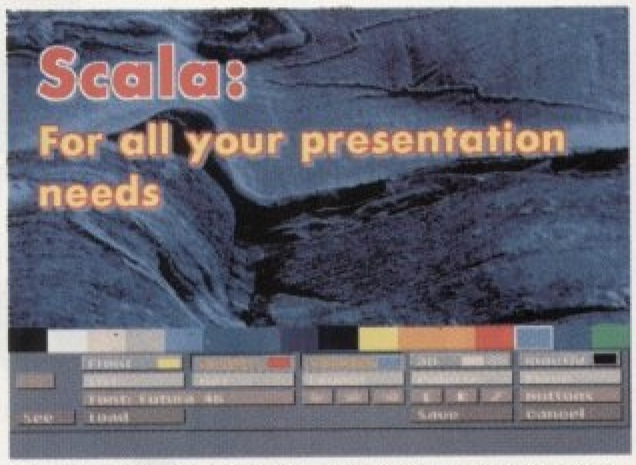
It is the first time Deluxe Paint IV has been packaged with any Amiga and it supports overscan for desktop video, 3D perspective and animation, and enables work with all 4,096 colours onscreen.

AmigaVision is the computer giant's own authoring language, integrating Amiga files into an icon-based flow chart and allowing users to assemble their own presentations, combining animation, audio, text and graphics.

Presentation system Scala has a button-style interface and includes display backgrounds, a variety of fonts for text overlay and support for Ascii and PostScript files.

Said Commodore's head of multimedia Barry Thurston: "This latest package makes multimedia available at a realistic price for any creative business user. The Amiga 3000 is ideal for use in corporate communications and presentations, interactive training, animation, CAD and control and simulation procedures."

Price starts at £3,524.



Scala is one of three packages being given away in latest A3000 packs

Six thousand balloons released

THE sky turned white over the BBC's Pebble Mill studios recently as Evesham Micros handed over a cheque for £6,853 to the BBC Children in Need Appeal at the start of their Mighty Balloon Marathon.

The launch of more than 6,000 balloons was the result of months of writing tickets and was watched by millions of TV viewers.

Each balloon was labelled with the name of an Evesham Micros customer and the owner of the balloon which travelled the furthest by January 31, 1992 will win an A500 and colour monitor. The person returning the winning ticket receives an Atari Lynx games console.

"Sitting inside a cold enormous balloon net for several hours, with thousands of balloons to inflate, isn't everyone's idea of fun," said Evesham's marathon organiser Richard Hicks.

"But it was all worthwhile to raise such an amazing figure. The most thanks must go to our generous customers and everyone concerned with local fund raising which managed to boost the Marathon total by an extra £680," he added.



The balloons go up at Pebble Mill

A1500 to run at 33MHz

A CARD to increase the speed of A1500 and A2000s is set to be released in the UK soon by Silica Systems (081-309 1111).

Selling at £999, the Great Valley Products 68030 processor fitted with a 68882 floating processor unit will run at 33MHz, faster than any of its competitors.

It will have a hard disk controller and is supplied with four megabytes of 32-bit RAM which can be expanded to 16 megabytes. A spokesman for Silica said that while the board is based on Combo technology, it remains nameless.

Said Silica's Andy Leaning: "GVP's new card upgrades the Amiga 1500 to give it the processing power of an Amiga 3000. Anyone considering buying an Amiga 3000 can now buy an Amiga 1500 and GVP card and get the same specification and power for £1,575 less."

Facelift for A1500 bundle

DETAILS released for a new A1500 bundle show Commodore will continue to direct the computer towards the family.

Three games will be contained in the pack – Puzznic, Toki and Elf. Deluxe Paint III, Home Accounts and The Works make up the bundle's serious content.

A Commodore spokesman said the firm were optimistic that in 1992 sales for the mid-range machine would be increased to between 15,000 and 20,000 units. The A1500 continues to sell at £999.

Unix reseller appointed

A MAJOR supplier of systems solutions have been appointed by Commodore as the sole UK Amiga Unix reseller, supplying and installing Amiga Unix platforms, software and networking products.

Applied Systems Group have been working closely with Commodore for some time on the development of Unix and networking systems for the Amiga, including Network File System, TCP/IP, MS-DOS/Unix and AmigaDOS integration.

Commodore claim that the platform outperforms traditional vendors in its price bracket and say many early evaluators of the product have switched to the Amiga from Sun 4, 486 and 68000-based workstations.

Applied Systems' technical sales director Tony Leatham said: "The adaptability of the Amiga is increasing all the time. Amiga Unix software titles will include the most popular database engines as well as graphics and DTP packages."

Commodore's Barry Thurston added: "As an Amiga Unix reseller for Commodore, Applied Systems can now translate their developments in both environments into complete business solutions."

Commodore added that ASG work with many blue chip firms and install systems where the multitasking Amiga could be employed.

Prices depend upon the type of application and number of computers required by firms. Applied Systems can be contacted on 0724 280222.

Four million colours for CDTV

AMIGA CDTV owners will soon be able to buy a card to enable 400,000 colours from a total palette of four million to be displayed onscreen at any time.

Plugging in to an expansion socket at the back of the machine, Advanced Video Mode Card will sell for £49.99 and is planned for launch within the first few months of 1992.

Amiga heads for BETT

FOLLOWING on from the publication of the Commodore Schools Catalogue recently, the company have announced that they plan to show curriculum solutions for all subjects at the BETT '92 education exhibition.

The complete range of the manufacturer's computers will be displayed, including the Amiga and Amiga CDTV.

The Amiga will feature as an ideal system for Special Needs departments and will be shown with the Concept 2000 keyboard and Touch Window.

The A500's high quality colour, graphics, sound, video, text and animation capabilities are also planned to be demonstrated through curriculum applications.

"Commodore are committed to providing affordable quality solutions to meet the needs of both teachers and pupils within the parameters of the National Curriculum," says their education manager Peter Talbot. "This will be demonstrated at BETT '92."

The show runs from January 22 to 25 at London's Barbican Centre and entrance is restricted to those working within education.

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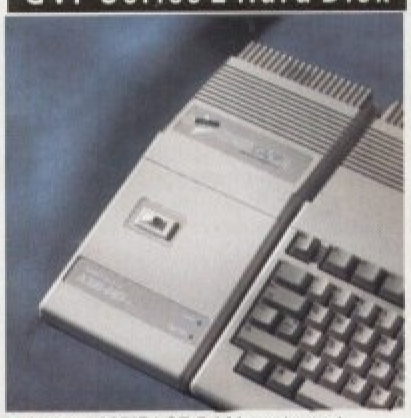
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AMIGA 500

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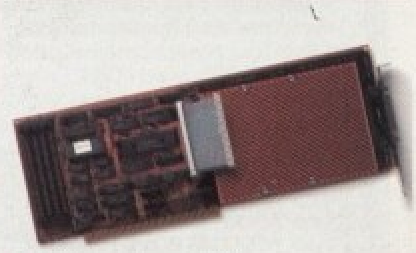
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Philips colour monitor MkII	£249
KCS PC Power Board	£235
ATonce	£169
ATonce A2000	£199
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Protar A500 HD 2Mb Ram Expansion*	£115.00
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AMIGA

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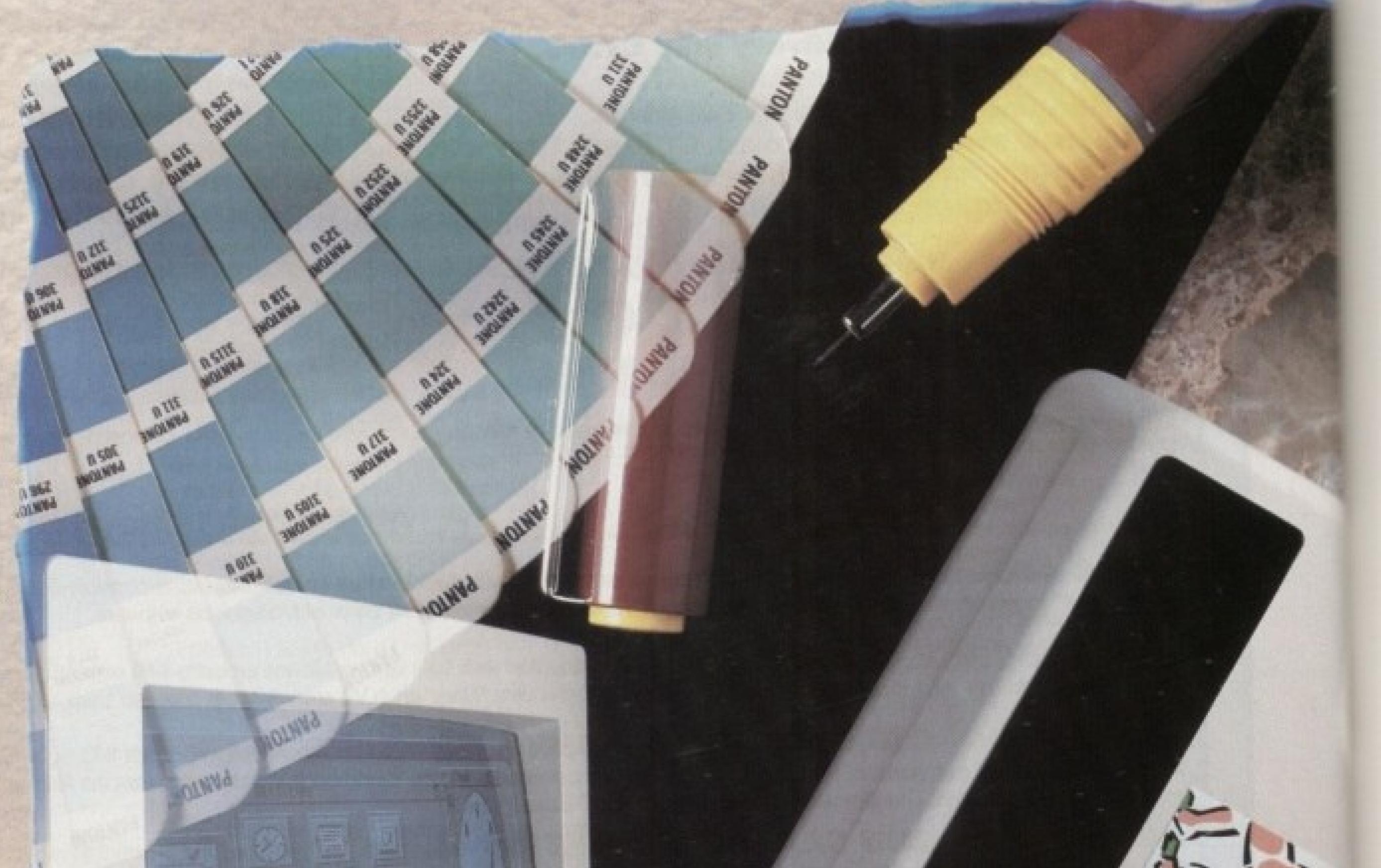
PACK A comprises of - Platinum Works, Deluxe Paint 3, Populous, Simm City, Battle Chess and Their Finest Hour

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Capture It

Oxxi grab Superbase 4

RIGHTS to top Amiga database Superbase 4 have been sold to an American software house only months after Software Publishing Corporation took over its developer Precision Software.

California-based Oxxi will handle all support and updates for the package, and operate technical support and distribution from Precision Software's old UK office. Other Oxxi packages are also available from the building.

SPC's Irfan Salim: "The sale of this division of Precision Software is consistent with our objectives, stated at the time of the acquisition. We intend to invest in the Superbase product line for Windows and build on the product's leading position in the GUI relational database market.

"Precision's Commodore and Atari products clearly do not fit in with our focus on PC application-based software," he added.

Oxxi can be contacted on 081-330 6911 but the firm are looking for new premises and so this is expected to change.

Swapping OS

A BOARD which will enable Amiga owners to swap between different versions of the computer's operating system is now being imported into the UK by Aquarian PD (0703 685006).

Supplied without ROMs, MultiStart II can switch between Workbench 1.2, 1.3 and 2 through keyboard commands which reset the Amiga and force it to progress to the next ROM plugged in to the board.

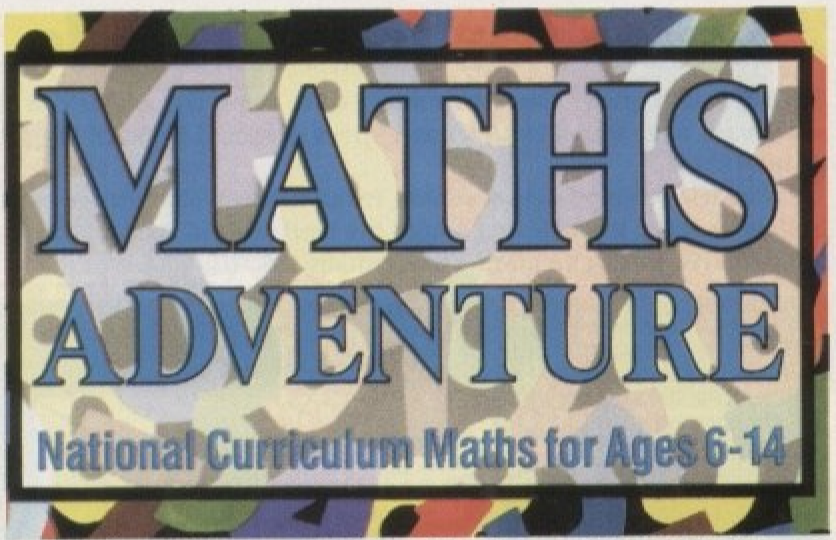
Complete with an easy-to-understand manual it costs £39.99. ROMs cost between £36 and £48 each and are available from the firm.

Amiga best buy

TESTS by consumer magazine *Which?* found the Amiga to be the best buy for games players, giving the machine a boost during the run-up to Christmas.

Five non-PC compatibles and four PC compatibles were examined by the magazine and while each had selling points, the Amiga was found to have the edge in terms of cost and games software availability.

The machine was criticised, however, for its user interface and disk drives. The Apple Macintosh Classic was awarded best overall buy.



Junior school-aged children can polish their maths in a fun way with Maths Adventure

Maths to be played with

A NEW maths adventure program for the Amiga enables children aged between six and 14 to revise and check their progress in National Curriculum maths in a fun way.

Using a series of four games, questions are asked on a wide range of maths topics with correct replies taking the pupil from the land of the cave men to being tasked with saving a city from destruction by unknown creatures.

Topics covered in Kosmos Software's (05255 3942) Maths Adventure include multiplication, addition, subtraction, division, fractions and decimals. Alternatively, everyday use of the subject can be covered in money problems, shape and space, or weights and measures.

Each section can be specifically asked for, allowing students to practise individual sections of the curriculum with which they have difficulty. There are four difficulty levels, adjusted automatically to suit the child's ability.

During the exercises, the computer keeps track of a pupil's progress and if mistakes are made the correct answers are displayed onscreen. Records of performance are kept for each topic and these can be examined or printed as hard copy at any time.

Price: £25.99.


The next time ProFlight goes into battle, there'll be 3D effects and dogfights

Tornado goes 3D

BUDDING fighter pilots will soon be able to get behind the controls of ProFlight 2, the latest version of the Tornado flight simulator from HiSoft (0525 718181).

The main addition will be enhanced gameplay, although the firm would like to maintain Proflight 2's reputation as a serious program. This is achieved with 3D effects, moving objects and intelligent enemy jets which will engage in dogfights.

Scenery will be improved and the programmers are hoping to add runway lighting and different enemy aircraft types. Company boss David Link says it will take features from other military simulators and beat them. Upgrades will be available but prices remain to be fixed.

Citizen get Swifter

AN ENHANCED version of Citizen's Swift 24 printer is being targeted at home users, small businesses and schools.

The Swift 24e now runs at 216 characters per second. It has an extra two fonts and is supplied with a free colour kit worth £38. The printer sells for £369.

Libraries share PD

PUBLIC domain and shareware disks are to become more freely available following a decision by more than 30 libraries to agree to share all releases with each other as soon as they become available. The deal came at a recent conference called by Derek Meakin, chairman of Europress Publications, publisher of *Amiga Computing* and its sister magazine *Shareware Shopper*.

He explained: "One of the main reasons we held the conference was because of the acute problems *Shareware Shopper* readers said they were facing in obtaining disks reviewed in the magazine."

The industry-proposed solution will involve all-formats library Advantage duplicating all disks reviewed in the shareware magazine and making them available to other libraries advertising in that month's issue.

Advantage live at 56 Bath Road, Cheltenham GL53 7HJ and can be contacted by phone on 0242 224340.

Video help arrives

COMPLETE Training Package for the Amiga is a video package just released by New Image Videos (0723 362218).

Written by two Amiga experts, the video is sold with an Amiga Jargon Dictionary and Quick Technical Reference Guide which explains Amiga phrases.

The Guru Meditation Guide unravels the mysteries of Guru Meditations and enables users to benefit from the information they provide. Utility software supplied allows students to follow step-by-step examples shown on the video.

Price of £24.99 entitles customers to a postal help service.

Devpac assembly complete

ASSEMBLY language programmers are now able to buy Devpac 3, the latest version of the development system from Bedford-based HiSoft (0525 718181).

It now has a new multi-window editor and an improved assembler running up to 40 per cent faster than its predecessor. A debugger is also included to aid bug hunting and learning.

Complete with all necessary files, a linker and manual it costs £69.95. Upgrades from earlier copies are available for £34.95.

AMIGA COMPUTING NEWSLINE

Saver for laser refills

FREQUENT laser printer users can now save up to 50 per cent on the cost of replacement toner with a long life toner system developed by Beach Imaging (081-850 8344).

Compatible with most types of printers, Permajet consists of a cartridge which has been modified to enable it to be used five times, and refill bottles. The system costs £190, making the price for each cartridge £38.



With Permajet most laser printer users can recharge a single cartridge four times, giving reasonable savings on running costs

Upgrade for Harlequin

The 24-bit graphics board, Harlequin, has been upgraded to offer improvement in applications such as animation and multimedia.

The enhancements give it an extra four modes, colour cycling, full-screen overlay and an increase from double buffer to six buffers. New modes are 24-bit look-up, 15-bit true colour, 8-bit true colour and 8-bit pseudo colour.

"The Harlequin+ represents the most exciting advance for the Amiga in professional video since Newtek announced the Video Toaster," commented Amiga Centre Scotland's Martin Lowe.

"The Harlequin+ provides broadcasters with features not found on any other PC platform. It offers a challenge to software developers to make full use of its additional functionality," he added.

At the time of going to press its price remained to be fixed, but the firm have pledged to offer an opportunity to upgrade to users of the earlier version.

40MHz planned for 040

AN AMERICAN hardware manufacturer is set to produce 68040 accelerator cards for the A2000 and A3000 which are designed to run at 40MHz when chips become available.

The first SupraTurbo 68040 boards will run at 25MHz, support 64 megabytes of RAM and have a 4k data cache.

Supra expect to have the product available for both machines early this year. Supplied with four megabytes of memory, it should sell in Germany for DM 2,800 (about £965).

DO YOU KNOW SOMETHING WE DON'T?

Although *Amiga Computing* has scores of contacts in the Amiga world, we need you. If you have some hot news ring John Butters on the news desk now on 0625 878888 or fax to 0625 879966. All information supplied will be treated in the strictest of confidence.

Talk to the CDTV

MICRODEAL (0726 68020) have announced the immediate availability of a microphone and a French language tuition program for the CDTV player.

Voice Master is a package including a microphone and interface, plugging into the machine's parallel printer port and requiring no external power supply.

It is designed for use with the company's interactive CDTV software such as Joky Karaoke, Voice FX or latest education release Asterix and Son.

Based on the popular Asterix cartoon character, Asterix and Son provides more than 30 hours of French study. There is an hour of spoken French, 400 colour cartoon drawings, complete English translation and more than 1,500 vocabulary items.

Split into sections to allow students to learn in different ways, it is aimed at all levels. Voice Master costs £39.99 and Asterix and Son, £34.99.

Graphics standard proposed

AT a recent meeting between developers in America, two leading hardware manufacturers joined forces to propose a new standard in Amiga graphics, to be called Standard Amiga Graphics Extension.

SAGE, established by Progressive Peripherals and Software and Digital Micronics, is described as providing a fast and efficient method for Amiga software developers to support all Texas Instruments processor boards.

PP&S say that while many firms were enthusiastic about SAGE, no firms have so far committed themselves to use it and say it is basically an "operating system within an operating system".

Budget genlock launched

AMIGA users are soon to be offered a new budget-priced genlock called Microgen from Power Computing (0234 843388).

A variety of fades are controlled through hardware and an on/off switch allows the user to swap to computer operation without the need to disconnect the genlock.

It can be used with composite monitors and has an RGB though port. Among its features are Key Invert, to enable special effects to be created "on the fly", without the user having to go through complex procedures.

Custom circuitry ensures that the Amiga will not crash and its low power design means it does not need its own external power.

Price: £199.

DIARY DATES

14 to 16 February 1992
5th International 16-bit Computer Show
Organiser: Westminster Exhibitions
(081-549 3444)
Venue: Wembley Exhibition Halls
The first post-Christmas show for Amiga owners.

7 to 10 April 1992
Which Computer? Show
Organiser: Reed
(081-948 9800)
National Exhibition Centre, Birmingham
One of the country's top shows, but heavily biased towards the PC.

12 to 14 April 1992
European Computer Trade Show
Organiser: Blenheim Online
(081-868 4466)
Venue: Business Design Centre, London
A trade-only show.

28 to 31 May 1992
Spring Computer Shopper Show
Organiser: Blenheim PEL
(081-868 4466)
Venue: Olympia, London
Promised to attract many Amiga exhibitors.

OVERSEAS

24 to 26 January 1992
Benelux Computer '92
Organiser: Interexpo & Media
(010 31 40 464601)
Venue: Eindhoven Trade Fair Building
Very similar to the UK's *Computer Shopper* Show.

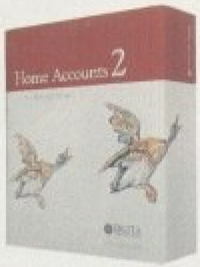
3 to 5 April 1992
Amiga Berlin
Organiser: AMI Shows Europe
(010 49 8092 24086)
Venue: AMK Berlin
The first German Amiga show of the year.

28 to 31 May 1992
Consumer Electronics Show
Organiser: EIG/CEG
Venue: Chicago
The show opens for the first time to the public on May 30 and 31 1992.

8 to 11 October 1992
Amiga Koln
Organiser: AMI Shows Europe
(010 49 8092 24086)
Venue: Koln Messe
A chance to catch up on the year's developments in the active Amiga world.

● If your company is organising a show relevant to the Amiga and it's not listed, let us know so we can include the information in the diary.

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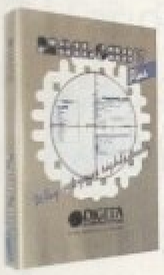
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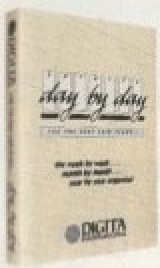
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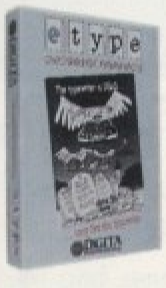
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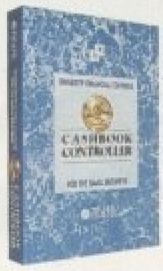


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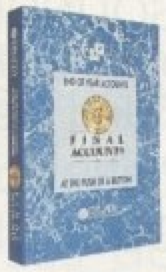


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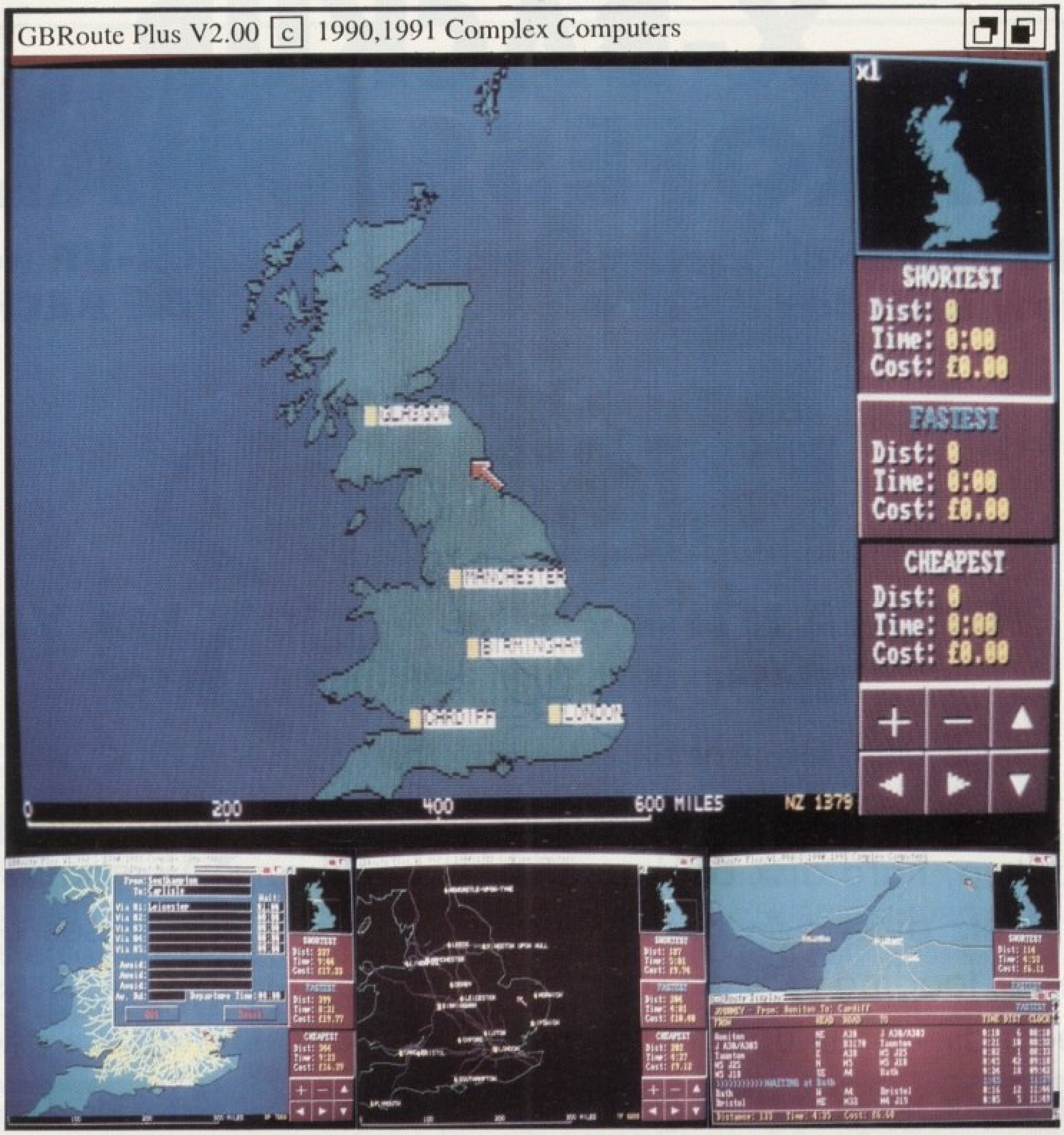
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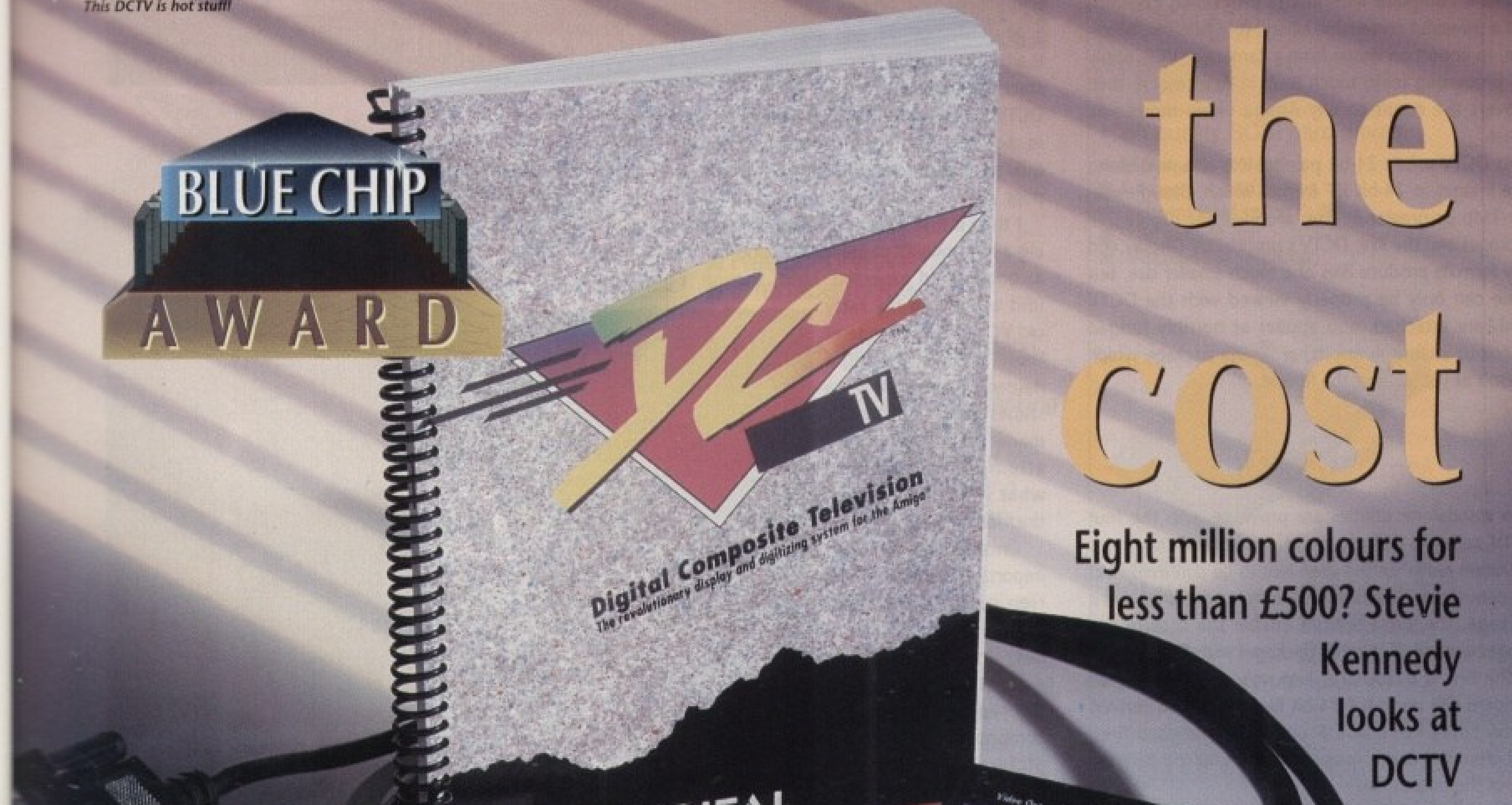

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This DCTV is hot stuff!

Colours without the cost

Eight million colours for less than £500? Stevie Kennedy looks at DCTV



If you feel left out of the 24-bit revolution by reason of budgetary constraints, the prospect of a pseudo-24-bit add-on for less than the price of a decent VCR may be hard to resist. HAM-E, covered in our July 1991 issue, was the first of such devices, but despite its impressive power-to-price ratio, it failed to make the impact its launch had promised. The newest contender, Digital Creations' DCTV, looks set to enjoy greater success. DCTV stands for Digital Composite Television, and therein lies the unit's idiosyncracy. The output from DCTV is in composite video form, so its images aren't displayed as sharp or detailed as a component RGB image. To view the DCTV screen, you must switch your monitor to CVBS input.

Initially, when the unit is first plugged in, this can be a bit off-putting because if you've been used to sharp RGB images, you can feel a bit deflated by the comparatively fuzzy CVBS "telly" pictures you will see on your 1084 or CM8833. For video enthusiasts, however, this should not be a cause for alarm, as DCTV is actually outputting a video-legal signal of the kind they would expect to see on tape.

DCTV, just like HAM-E, comes in the form of an external box you connect between the Amiga and your

monitor. When physical installation is complete, taking no more than three minutes, installing the software on your hard disk is a breeze, and DCTV's paint/digitiser package is up and running.

There's no need to open your Amiga – all the user need do with DCTV is twiddle the Pixel Adjust knob until the unit is properly calibrated to the signals being output by the Amiga's video chips.

At this point, DCTV begins to show its superiority over HAM-E. The latter's bundled paint package, though free, was universally received as a disappointment. DCTV's software rests comfortably at the opposite pole, being easy to use, smooth in operation on even an unaccelerated A500, and offering many powerful features.

In one powerful package, Digital Creations have crammed in a fully specified paint package, digitising software complete with image processing controls, and a powerful conversion utility. It is possible, therefore, to import an image from a camera or VCR, apply the processing tools, touch it up in Paint mode, then convert the result to any Amiga video mode you please.

As DCTV uses a 24-bit palette, it is also possible to save images in 24-bit IFF format which, though usually 1Mb or greater in size, are ideal for use in DTP packages and the like. DCTV's proprietary Display and Raw formats produce files of a much smaller size, but these can only be properly viewed with the DCTV hardware attached, and appear as horribly fudged 16-colour images in any other Amiga package which doesn't as yet support the format.

Multiple formats

Two standalone utilities are provided with the four DCTV software disks to make this sort of to-and-fro operation easier on the user. Not to be confused with the conversion options available from within the paint package, the extra utilities enable the user to use images generated in other packages with DCTV.

The first is IFFtoDCTV. Not only will it handle all standard IFFs up to full 24-bit files, it will also convert Turbo Silver RGB8 and Sculpt4D compressed files, and offers the user a range of options on the parameters of the output file.

The second, S4DtoILBM, is used when dealing with Sculpt4D's component 24-bit images, which are saved by Sculpt as separate red, green, and blue files. S4DtoILBM grabs the three files and combines them in a standard 24-bit IFF which DCTV can import and display. As with IFFtoDCTV, the user can specify various parameters for the resulting image.

So much for DCTV's communication skills. They would be of little use if the paint software was of inferior quality. Happily that is not the case. DCTV's paint package is both powerful and friendly.

There are three options once DCTV has kicked in – Paint, Convert, and Digitise. The first to fall prey to eager mouse clicks is bound to be Digitise, so let's start there.

Generate titles for videos in full colour



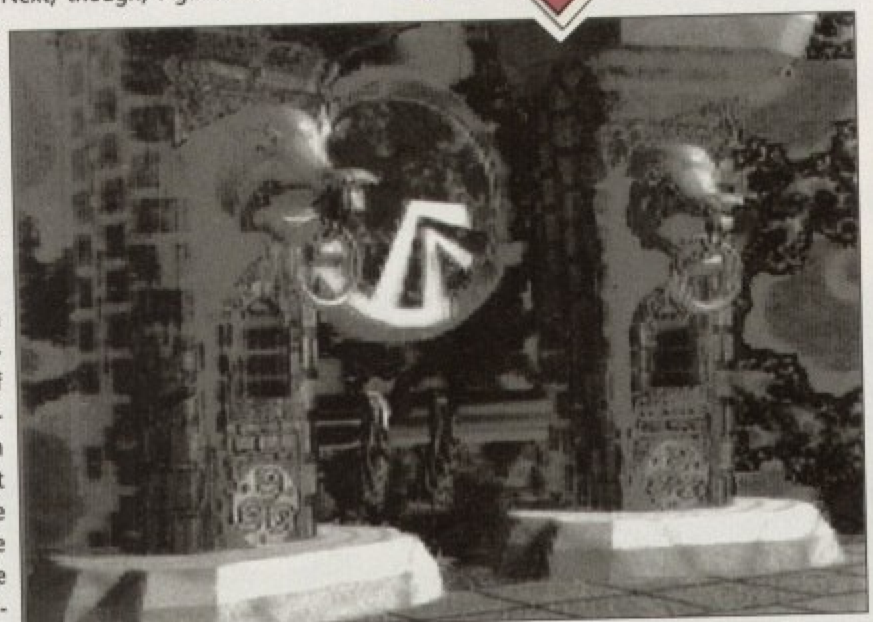
The on-board digitiser would appear a little disappointing at first sight. It has no instant snapshot facility and must take its images from a still source, either a camera pointed at a stationary object, or a VCR on pause. Having used it for a while, though, I found it a bit of a cracker. For a start, its inclusion puts DCTV far ahead of HAM-E, as the latter has no built-in digitiser. The biggest surprise, however, was the quality of grabs one could garner from even a fairly poor VCR.

I tried it first with a NICAM S-VHS machine sporting a high-quality pause feature, and the results were as good as I'd expected. Next, though, I gave the unit a bash on my ratty old VCR at home – one of those adept at making a paused picture look like a snowstorm – and DCTV made some pretty good attempts at grabbing what were rather indistinct images.

Once a frame has been imported, the digitise section has a selection of tools with which to process it. The user can sharpen the image, adjust the red, green, or blue components, or alter the picture's chrominance (colour level) and luminance (brightness). The latter pair are complemented by tint and contrast controls, rounding off an extremely useful and easy to use set of sliders.

The original image is stored in a buffer ready to be restored if you make an almighty mess of things, and when you're happy with the alterations, clicking on Commit will permanently alter the data. You're now ready to save the frame or shove it off to the paint section for touching up.

Here lies DCTV's heart and soul, and as a paint package there is little to fault it on. Operations are split into six main sections – Fill, Brush, Stencil, Gradient, Color and Wells – each of which can be accessed no matter where in the package the user is currently working.



DCTV can also excel at traditional art studies

The Fill section offers four main types of fills and a host of variations on each. The gradient fill alone has eight different techniques to choose from, ranging from straightforward horizontal gradients to the quite weird looking spiral fill.

As the unit is displaying the gradients in composite video, they can look less smooth than a £1,500 24-bit card, but the results are still immeasurably better than standard Amiga displays, including even the best HAM picture.

A surprising extra is the warp fill, which wraps the currently active clip (brush) around either a cylinder or a sphere. Not as powerful as G2's Imagic software, perhaps, but a lovely touch in a bundled paint package for a peripheral in this price bracket.

DCTV's brush section is where a lot of the action takes place in paint mode. Here the user chooses with what type of brush to paint, how the colour will be applied, and the size and flow rates of the painted ➤

Smooth colour transition

DCTV doesn't output an RGB signal, so it doesn't pretend to be another Amiga video mode – unlike the two extra register modes supplied by HAM-E. Instead, it offers four to eight million true colours on a "video-legal" composite screen.

This means you can have a full colour screen without the colour gradations resulting from HAM's method of modifying pixel colours depending on the colour of the pixels around them. There's no HAM fringing, and no ragged transitions from one colour to the next.

There is a full 24-bit palette to choose from, so there are actually many more colours available than a videotape will handle. You'll notice the difference between a DCTV display and a Harlequin, of course, but then you gets what you pays for or, in the case of DCTV, you gets a lot more than you pays for.

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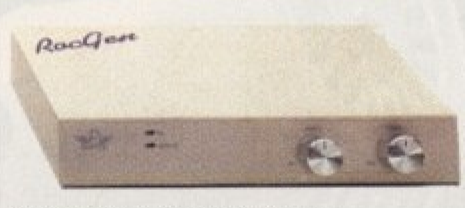


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lines.

The effects available are, again, surprisingly complete in a free package. There are nine in total, any one of which can be applied with brushes of twenty different sizes. Control of paint flow is available from 1 to 100 per cent, and even the brush's X/Y ratio can be set manually.

Of the effects, Airbrush, Blend, Smooth, and Shade will be most familiar to Amiga owners, even if the quality of painting they can produce is not, but Rubthru and Water will be new to most. Rubthru enables the user to rub away part of the current image so that the picture held in the spare page shows through. If used with a low flow setting and a carefully planned spare page, Rubthru can produce excellent effects.

Faces appearing through the mist, pictures fading gently into one another, and even video effects can be rendered in this fashion. If, for example, the user enables Rubthru at a flow setting of 20 per cent, and uses full screen box fills, the spare page can be made to fade in over a number of frames, and the sequence saved to tape as a link in a video presentation.

True, the effect could be produced on a presentation package with a lot less hassle, but DCTV offers a much higher quality true video effect when used in this manner.

Unique results

The Water tool is less spectacular, but capable of results none of the other brushes could produce. It's designed to work in the same way as a water-colour artist's brush works, in that it "holds" a certain amount of paint which depletes as you brush across the canvas.

Depending on the flow setting, this will happen faster or slower, but the paint will always blend with whatever colour it is applied over, just as with water-colours. The results are ideal for pastoral scenes and other soft-focus painting, such as waterfalls and the like.

Overall, the brush section is as comprehensive as any of the 24-bit paint packages we've seen, with the possible exception of TV Paint, and offers options enough to satisfy any owner.

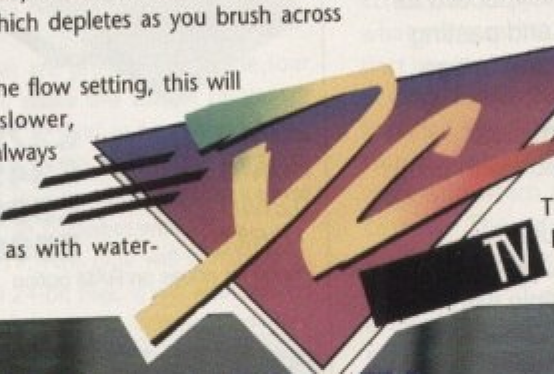
The remaining features – Stencil, Colour and Wells – are a little less exciting, but they all continue DCTV's theme of completeness and attention to detail. Stencil, for example, has a "colour closeness" option which enables the setting of a mask colour within definable tolerances.

This means you can choose a low setting and the mask will include all colours within, say, 33 per cent of the colour you specified. If you're working against a background of a gradient fill, you can thus choose to mask in a picture gradually.

The Colour section gives the user control over the colour chosen and offers four ways of defining new colours. There's RGB, CMY (handy for anything you might want to print to paper), HLS, and HSV, so no matter what equipment your final picture is to be output to, you should find a colour standard to fit your requirements.

The Wells section is a simple colour choosing screen, but has the now obligatory mixing area for the user to experiment on new colour mixes. The mixer defaults to a solid colour airbrush which takes its parameters from the normal brush size and flow settings, so it's fairly easy to use.

I for one remain unconvinced how useful such mixers are, as most computer artists aren't converts from canvas, but it has been included because DCTV includes just about everything else.





Clever custom formats

DCTV's custom formats are very clever little beasts. When you create a DCTV image and save it as a 24-bit file, it can take up over 1Mb of hard drive space. The same image saved in DCTV's display format will occupy only 50k or so, because it is a 16-colour IFF with one ingenious difference.

When saved, the top left-hand corner of a DCTV image contains composite video wave information which, when deciphered by the hardware, provides the information needed by the little black box to display its own much more colourful pictures. This means you must never paint over the top left-hand corner of the screen when messing about with DCTV images in another package, but the restriction is hardly worth talking about when the advantages are weighed up.

Take the process of creating a couple of dozen ray traced 24-bit images using Imagine or Sculpt 4D (both of which now support DCTV). To animate the sequence, you'd normally need either a frame advance video or an Amiga with many megabytes of RAM. With DCTV attached, the 24-bit files can be loaded one at a time and saved in DCTV display format, then loaded into DPaint 3 to be tacked together as an animation.

The finished product, when played through DCTV, will appear in its original form, and can be saved to tape in real time as a continuous composite video signal. The process can be a lengthy one, but it negates the need for lots of RAM, and cuts out the expensive video recorder altogether. The advantages to the semi-pro or video enthusiast are that DCTV thus brings full video colour quality animations down in price by at least fifty percent.

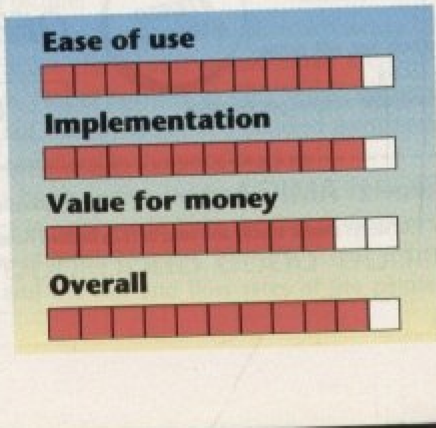
Conclusion

DCTV offers the best chance many video enthusiasts will have of jumping on the 24-bit bandwagon, and is the closest anyone equipped with a wallet of normal proportions will come to his or her own video paint-box system. With its digitising option and excellent software, it is a clear winner over HAM-E, and comes close to being the most amenable pieces of equipment I've ever used.

The only problem DCTV might encounter is that its strength could be its main weakness on a first viewing, due to its reliance on a CVBS display which might look a bit fuzzy to users of sharp RGB monitors. On good monitors, even in composite mode, this is less restricting, but on one old 1084 I tried it on, the fuzziness and flickering made my eyes water.

Apart from this, and as long as the niche market it aims for actually exists (one step forward all you video enthusiasts and small-scale producers), DCTV should sell like hot potatoes in a Russian bread queue.

DCTV is a product of Digital Creation Inc
Phone: 0101 916 344 4825
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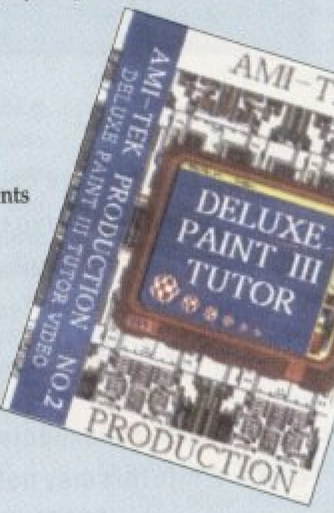
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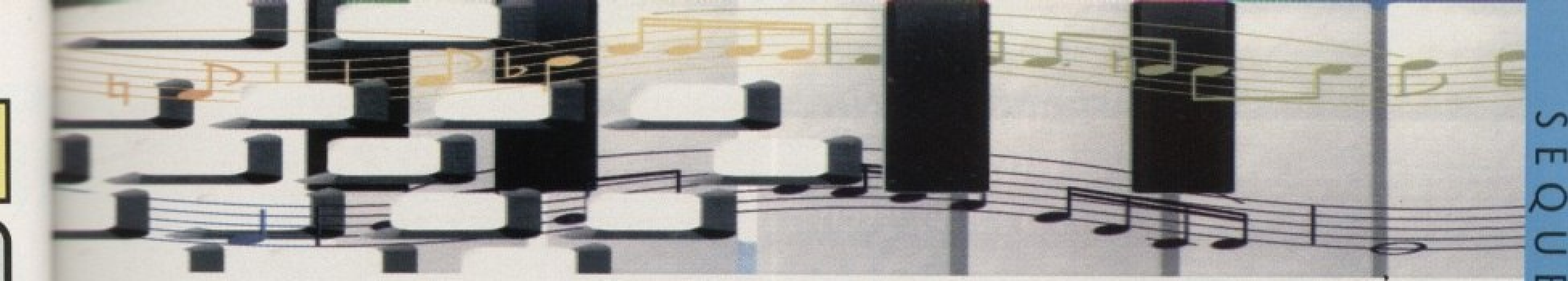
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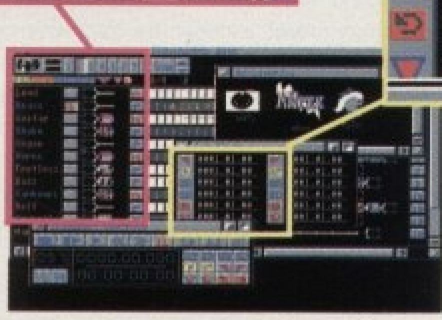


Musical plumbing

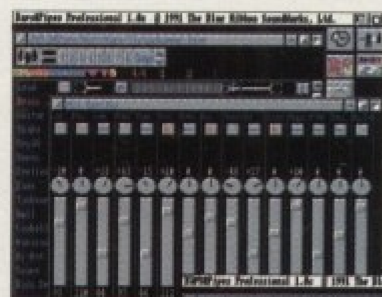
At last, Bars & Pipes Professional has arrived. Paul Austin looks at a music package that understands the essentials of composing







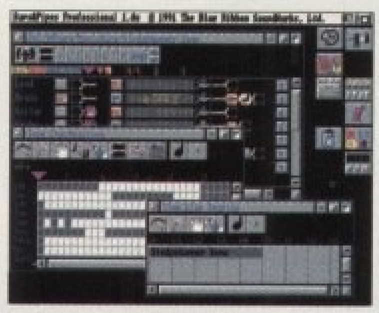
Looks confusing, but it couldn't be simpler. Accessories to communicate with the outside world, flag settings to leap to the vital points, and group selection for speed



Mixing couldn't be easier. Group selection once again, with live fader transitions on mix down



Click on any sequence and its very own editor appears. Add the tempo of your choice straight from the palette or employ the power of the tempo map



The big musical decisions are made simple thanks to the friendly song construction window and the useful addition of timeline scoring

Most sequencers are fairly similar, the only difference being the number and variety of extra features. As a result, choosing one is relatively simple – a brief glance down the features list and all the essential questions are answered.

After all, the vast majority of sequencers are little more than musical engineering platforms. In goes the raw material and out pops a multitrack masterpiece. This is just about perfect if you know exactly what you want from your finished piece, but if we're honest... does anyone?

If you're essentially a composer rather than an engineer, you'll be well aware that real music is 90 per cent inspiration and 10 per cent planning. It just happens – you hit a chord, play a riff, and suddenly there's a song in the making. With most sequencers this "suck it and see..." approach isn't easy, but with Bars & Pipes Pro it couldn't be simpler. If you're a songwriter rather than a producer there simply isn't another sequencer that comes anywhere near. It is stunning, and a pleasure to work with to boot.

The program's primary strength has to be its open-ended and flexible approach. If you want to try something new it actively encourages you to have a bash, and if it doesn't work out everything can go back to where it was without any risk of damaging the original data.

As you may have noticed from the screenshots, the phrase Bars and Pipes doesn't simply refer to measures and instruments. In fact, a pipeline is the soul of the sequencer, through which all the Midi information passes.

On the main track screen the pipelines start on the left, flow through the sequencer and emerge on the right. Once there, they enter a final section of pipe, prior to leaving the package and heading for the synths or modules of your choice. The clever bit is what can be added to the pipeline to alter the raw Midi data flowing through it. This is where the ToolBox makes its mark.

As the name suggests, the ToolBox is a collection of gadgets that do all manner of wondrous things to Midi information. The variety is impressive and increasing by the day as more tools are added in the form of expansion modules. These modules contain numerous tools aimed at a specific areas such as multimedia, studio work or simply to enhance creativity.

Using a tool is simple – just select it from the box with the trusty rodent and drop it into the pipeline on either side of the sequencer.

If tools are placed in the pipe on the left of the sequencer, the actual Midi information within RAM is altered to reflect the chosen effect. However, if a tool is ➤

Editing options – what's on offer

As exciting as the tools section can be, it's still only part of the package. Equally important has to be the program's editing options, and here again Bars & Pipes Pro isn't found wanting.

Double clicking on any sequence brings up the edit window which will display its data as either standard musical notation with traditional bass and treble clefs, in the familiar piano roll format, as hybrid notation or even as an event list.

A special plus for real musos is the option to print in notation form, complete with lyrics and chord designations. As you might expect, the actual editing of tracks is much the same as any sequencer with the usual array of cut and paste combinations. Just about every editing option is on hand, so even hardened studio hands shouldn't have any problems.

A song construction window does all of the large scale editing. As a result, building complex multi-sequence songs is easy. This, combined with the master parameters window with its ability to define lyrics, chords, keys, scales, rhythm, global dynamics and time signatures, makes large scale editing and arrangement simple.



A few more tools than come with the package as standard but even with the default collection, wondrous sounds await

➤ placed to the right side only, the data leaving the program and bound for the instruments is altered.

You can experiment as much as you like. If a particular effect sounds dreadful you can remove it at any stage, without permanent damage.

Another huge bonus of the ToolBox format is its flexibility. For example, if you were to place an Echo or Delay tool onto several tracks, you effectively get a separate signal processor for each.

This is because a complete copy of the tool is given to each track. Once in place, a simple double click and the tool reveals its very own requester. As a result, each track can be fine tuned to suit your particular taste.

It's even possible to build macro tools from individuals, so if you were particularly fond of a harmonised effect with a touch of modulation and a little delay, you could combine all three into a single tool which would then take its place alongside the others as a permanent resident.

Flexible tools

Tools aren't limited to single tracks – they can be employed on entire songs or just selected sections. They allow complex re-channelising of tracks on both the incoming and outgoing pipelines. It's even possible to apply tools to individual notes. Amazing...

There are a reasonable selection of tools bundled with the software, but I doubt it would be long before anyone could resist the temptation of the additional modules.

The number of tools on a track is limitless, as indeed is the number of tracks themselves – the only restriction is the amount of available memory. Two megabytes is about right – anything less and you could be struggling. Although the program will work with one megabyte, it won't thank you for it. Bars & Pipes Pro is big, and I won't even come close to explaining many of its features – there simply isn't enough space. Usually such a statement means weeks of misery with a manual the size of a phone book, but that's not the case with Bars & Pipes Pro. In fact it's quite possible to dive straight in and get results.

The entire design, layout and approach of the program is friendly and instinctive. For example, to mute a track you click on a tap until the flow stops. To overdub, click again and two pipes flow from the sequencer. Once more and a single pipe appears, allowing only pre-recorded data to emerge.

This simple and logical approach filters right through the package. Consequently the excellent manual becomes more of a handy reference than a constant companion.

Tracks can be recorded individually or as groups – up to eight groups can be assigned in any song. Selection is simple and from then on all of the component tracks act as one. Tracks can be easily merged or re-recorded and individual parts can be marked and edited with the aid of 12 flag icons which sit along the top of the Track screen.

Up to four auto-locate points can be defined throughout the piece. Automatic punch-in and out icons drop the sequencer into record mode over a pre-selected section. Loop icons allow eight attempts at a specified section, after which you can choose between any of the eight to use in your creation. Edit markers allow you to define sections freehand or via their beat or measure. Even a stop icon is available so the sequencer won't trundle on forever if left unattended.

Like all modern sequencers, Bars & Pipes Pro has adopted the familiar tape deck format to control recording and playback. The usual fast forward and rewind functions await alongside play and record, which can function from the start of the track or from the position last stopped at.

Along with the old standards are buttons to activate the various flag options, plus a useful option to play and record at 3/4 and 1/2 speed – very handy if you're struggling with a tricky bit. It's even possible to assign transport controls to hot keys on your master keyboard.



The standard track and transport combination, where most of the hard work happens. You can have things as clean or cluttered as you like...

Tempo – and time keeping in general – are very well catered for, with four definable tempo speeds waiting within the tempo palette, plus a separate tempo map which allows you to add time changes graphically.

All of the above, plus a dual SMPTE and BPM display – in fact a full complement of SMPTE options – are available with the usual array of timecodes and with both internal and external configurations.

When you've created a classic, added the effects and edited out the odd mishap, the final job is the mix. As you can see from the screenshots, Bars & Pipes Pro comes complete with its very own onscreen mixing desk. How thoughtful...

Just like its infinitely more expensive hardware relations, it sets both the volume and pan (stereo position) of the sound. The limitless number of faders are controlled by the trusty rodent, and as in the track screen groups of tracks, can be combined and adjusted as a single unit.

Individual faders or groups can be faded up and down on playback. If you're not sure about a particular mix, you can save it to the clipboard and experiment with another. When you're happy, just sit back and watch the faders automatically mix your masterpiece while you guzzle down a well-earned coffee.

As you've probably guessed, you're listening to a man in love... this is the sequencer I've been waiting for. Cute, cuddly, powerful and perfectly formed, what more could a muso want? This is a program written by musicians for musicians.

If you're a composer looking for a sequencer that will inspire rather than restrict, there's quite simply nothing that comes even remotely close to Bars & Pipes Pro. If you're serious about your music and are willing to pay serious money to enhance it, look no further than the best creative package in the business.

Power players

Underneath the friendly exterior beats the heart of a very serious sequencer, with a full range of system-exclusive commands and SMPTE options. As mentioned earlier, there's also a range of dedicated modules for multimedia and video applications.

To drive the DTV point home, Blue Ribbon Soundworks are presently developing additions which will operate with GVP's IV-24 multimedia card. The combination of Bars & Pipes Pro, SMPTE and the IV-24's PIP (Picture In Picture) could mean that Bars & Pipes Pro may well dominate DTV and musical combinations on the machine.

Support is also planned for the Sunrise Industries 12- and 16-bit sampling boards which could make the package a studio standard within the direct to disk market.

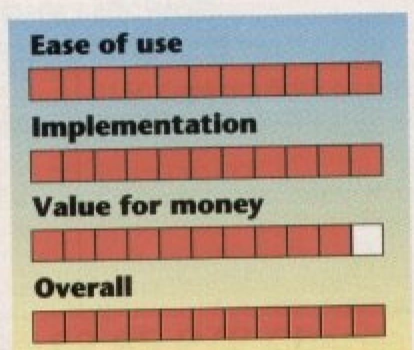
Even if the package isn't adopted by the big boys, your creations can easily make it into the studio thanks to the strangely titled Muffy utility, which coverts Bars & Pipes Pro's output into the universal Midi format that any studio sequencer will be happy to work with.

Other power options include complete ARexx support plus Big Sys, which allows the transmitting and receiving of system-exclusive information. This is ideal for sending and saving patch banks to your sequencer.

For the very serious, there's also an option to use up to five separate Midi ports, giving a total of 80 Midi channels to choose from. Obviously you'll have to invest in an appropriate serial expansion port but that's a small price to pay for the almost limitless power of 80 channels.

Bars and Pipes Professional
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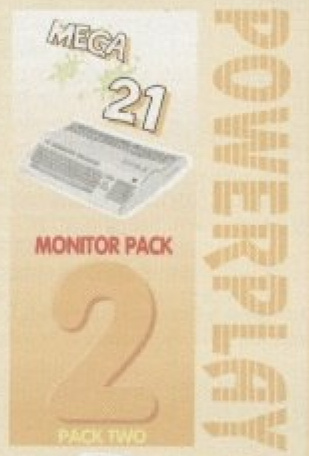
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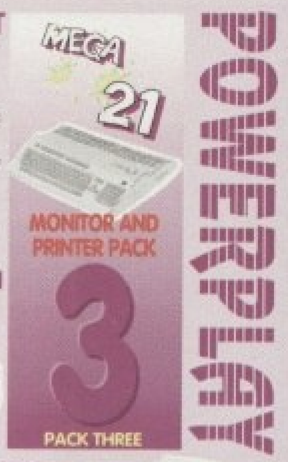


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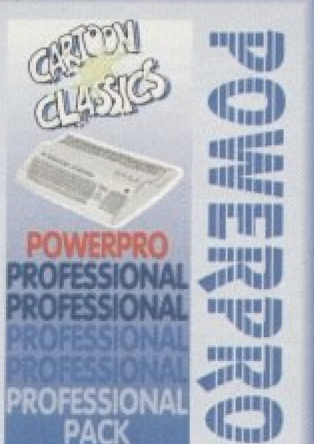


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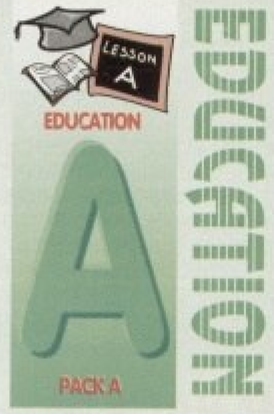
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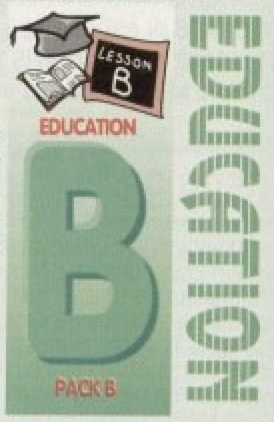
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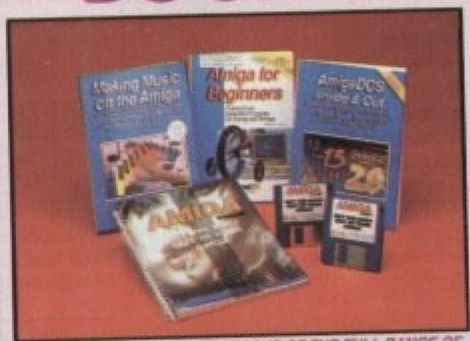


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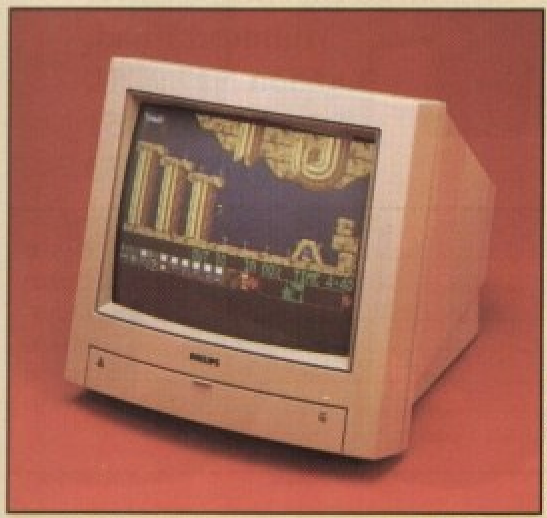
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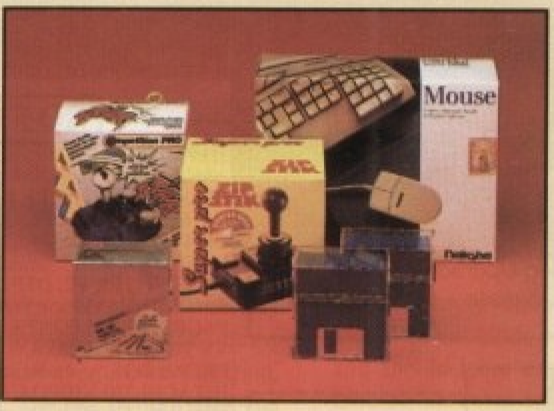
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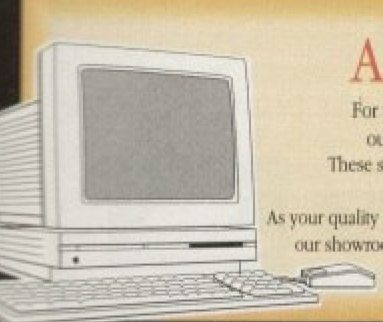
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THE DISK

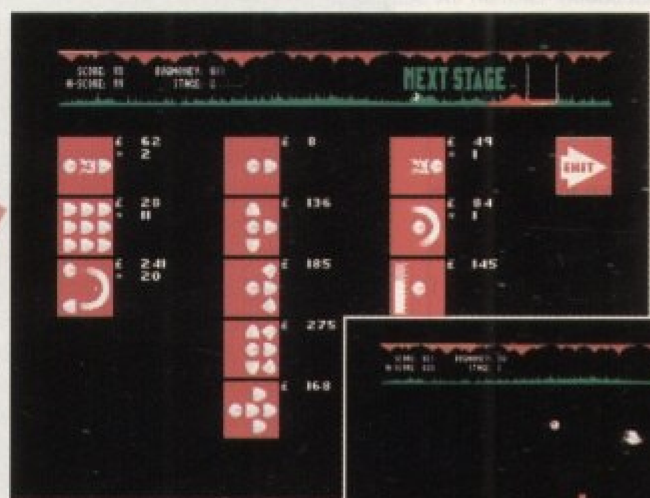


Can you protect your garden from bugs in Morgan Henry's shoot-'em-up?

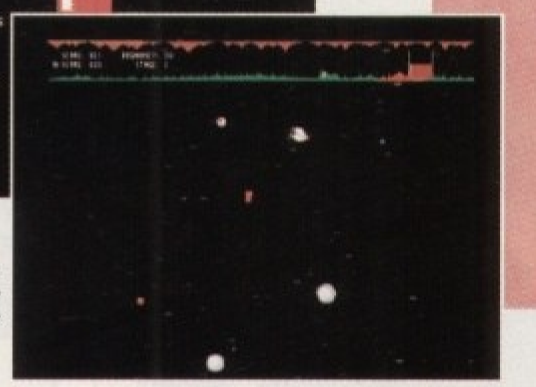
Garden guardian

Bugblaster is a game in which you are given control of a small, mobile insect-killer and charged with the task of keeping your garden free of infestation. The bugs are out to ruin your prize roses and only by furious defence will you avert the shame of having your neighbours peer over the back fence with a smugly superior expression on their faces.

The game is quite difficult to master, as your remote bugblaster travels a lot slower than most of the baddies. In addition, its initial firepower is feeble enough to make killing beetles a particular pain in the nether regions. Those T-80s of the insect world can take four or five shots from your peashooter without harm, so before venturing out of doors, its best to tool up on the armaments screen.



Get your mushy pea shooters here!



Kill those bugs before all the slime leaks out

Killing kit

To start with, you have only £200 to spend on armaments, and some of the equipment on offer is too expensive. Your basic peashooter, however, will fire only ten shots before it pauses to reload, and you'll quickly appreciate how limiting this is.

The armaments on offer are, from top to bottom and left to right, faster shots, more peas, long range peas, basic peashooter, three-way peashooter, concentrated three-way peashooter, five-way peashooter, mushy peashooter, speed up, better steering, and energy. The exit button takes you to the game.

If you take my advice, you'll invest in a three-way peashooter at first. It should be just inside your price bracket and should leave enough change to take on an extra ten peas or faster shots. With this armament, the first level – with its single bug – is a doddle. As you progress, however, you'll have to earn enough bug money to buy ever more expensive weaponry until you are to insects what Arnold Scharzenegger is to scriptwriters.

Maniac beetles

No, not the loonies who insist on driving a car designed in the thirties with an exhaust loud enough to wake the dead at thirty paces. Bugblaster's beetles are of a less annoying type, as they travel much slower than ladybirds and mostly in a straight line

When a beetle comes onscreen, run off to a reasonable distance, then turn and face it, shooting as fast as you can straight at its chops. Six or seven shots should bag the blighter. If you're too slow, and the beetle reaches you, he'll spin round and round, hitting you once on each pass until you put him out of your misery. At times like this, a three- or five-way peashooter is invaluable, as you can hit the beetle several times in one orbit.

The bugs

So what of your fearsome foes? The withering worm, the battle-hardened beetle, and the lascivious ladybird? The bugs are the easiest to deal with, but they are tricky to catch if you have no speed or steering power-ups, and can become tougher if they are allowed to eat one of the mushrooms left behind by the ladybirds.

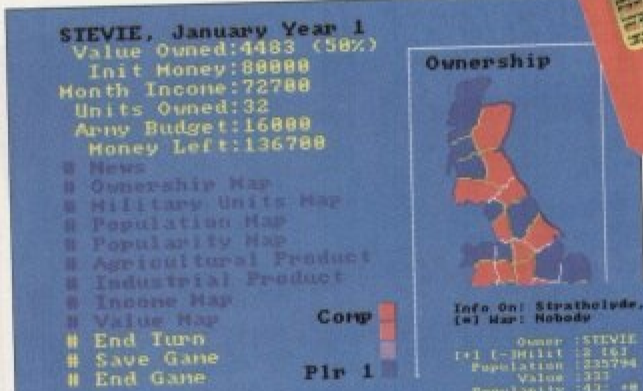
Ladybirds die with a single shot, but travel across the screen so fast that you're unlikely to hit them in time unless you're lucky enough to be firing in their direction as they appear. When the spores they leave behind begin to grow into mushrooms, be on the lookout for worms trying to feast on them. A bug fresh from the fungoid flesh-pots will belch rudely and become a lot harder to kill.

Slime!

The beaker at the top right of the screen contains slime which slowly leaks out into the garden, and acts as a time limit. When it has all leaked out, the bugs will turn and head straight for you like cockroaches at a tin of tuna, so have an eye on your speed of eradication.

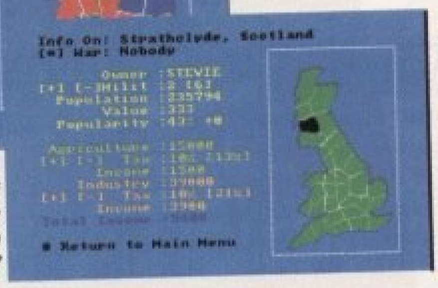
At the very top of the screen there is a thin line representing your energy. Every time a bug hits you, this is diminished until a gory giggle heralds the end of your insecticidal career. You can stock up on energy at the armaments screen, but this is expensive, and uses precious bug money you'd probably rather spend on military hardware.

Given a sound defence and arms acquisition policy (shoot very fast and with the best kit you can afford), Bugblaster provides a challenging and addictive game. But rush in with little thought for hardware and you won't last more than a level or two. Have fun!





To begin with, things look peaceful enough...



...but who can i attack from my base in Strathclyde?

Dictator

Author: Steven Pugh

The game Maggie tried to win but couldn't – can you succeed in becoming Dictator of all Britain?

Dictator as a game type should be familiar to many computer users. The idea is to build your strength from lowly beginnings, wage war on your neighbours, humble them into the dust, and then tramp all over them with large air-tread boots. The British, in the past no mean players at the real McCoy, don't call these games empire-builders for nothing.

You kick off as the nominal lord of about half of Britain. Some of your counties are strong in industrial output, some are better for agriculture, but all of them must be defended. To do this, you have to raise an army.

Armies, of course, take a few bob to raise and feed for a year (as the Chancellor recently discovered), and you have only enough cash initially to create a few units. Most counties already have a couple of army units stationed in them, but you'll need more.

Strategy

Dictator is all about strategy, and that means finely balancing all of the factors which affect the outcome. These are the value and income generated from a county, your popularity there, the relative industrial and agricultural strengths of each county, the tax rates you set, and military power.

On the first turn, there's no point in attacking anywhere as the computer will use this turn to build up military force in the counties from which attacks are to be launched. It's up to you to decide which counties are most important to you, then build up units in them to defend them against attack.

Remember that income is generated as a tax, so there is little point in upping the tax rates in poorer counties. Use the handy maps on the main game screen to find out where your strengths lie before making rash decisions.

There are county-by-county maps of monetary value, income generated, popularity, and military units, so there's enough information on hand to make general decisions before clicking on a particular county and getting down to the nitty gritty.

Once you do, you'll find each county can be developed in several ways. At the top of the screen there is an information line giving the county's name and its owner, and below that is Dictator's equivalent of The Big Red Button. Click on the asterisk beside the WAR button and click on a neighbouring county to instigate hostilities.

Tax rate

Before you do this, of course, you'll have thoroughly analysed the data on offer in the lower two-thirds of the screen. No? And you attacked anyway? Ah well, I don't suppose anyone will miss Essex.

You can set the tax rate for industry and agriculture separately, but note how the income figures change. If you decide you want a certain amount of income from a county, and it has a low level of agriculture, don't inflict high taxes where there's little chance of a high return – you'll only annoy the natives. Instead, it would be better to increase the state burden on industry. They deserve it anyway for making such a mess of our trade deficit.

Judgement

All values are altered by clicking on the +/– boxes beside each of the county's attributes. Tax rates start at ten per cent and military units, where there are any, will usually number only two. You'll need at least four or five units to ensure the defence of a key county, but as each unit costs £5,000 to raise, this can be an expensive exercise.

Dictator calls for a lot of good judgement on the player's part, and the computer is a very difficult opponent to beat. Whether played against a friend or the computer, Dictator is excellent entertainment.

Picturesque

Author: Paul Burkey

NOTE: This program really only works on 1Mb machines. You can load it on an unexpanded Amiga by interrupting the startup-sequence (hold down Ctrl and repeatedly tap the D key) and typing:

```
SYS:utilities/Picturesque/Picturesque
<Return>
```

but there will only be about 9k of memory available, and you won't be able to cut brushes, load pictures, and so on.

We apologise to 512k Amiga owners for the inconvenience, but it is a sign of the times. The A500 is now seldom sold with less than 1Mb on board, and a reader survey last year indicated that almost 90 per cent of our readers even then had extra memory.

On to the program! As Picturesque is designed mainly as a paint program, I won't dwell on the features common to paint packages. The large and well designed control gadgets speak for themselves. Where Picturesque is a real boon is in the creation of sprites for AMOS games.

To enter sprite creation mode, select Paint Sprites from the Project menu, and a box will appear in the top left corner of the screen. This is your sprite box, and can be expanded by clicking on the bottom right-hand corner of the box and dragging out to any size.

Spritely performer

The right-hand side of the control panel now holds information on the current sprite, including its size in pixels and its sprite number. You can skip back and forward through your sprite bank by clicking on the arrows.

When the up arrow is clicked, your first sprite is saved as and is replaced by a blank sprite box labelled "spare". You can now swap sprites, delete them, copy them, and generally muck them about. When the sprite is complete, click on the PUT button to add the sprite to your bank, then carry on with the next.

Shareware

Picturesque is a shareware program, so if you like it and intend to use it, please send a £5 donation to:

Paul Burkey
32 Cotton Close
Little Nelson
South Wirral

In return, Paul will register you as an official user and you will then be entitled to any upgrades he codes.

Disk functions

One feature of the program you're bound to find useful is its disk management menu. From here you can create a new drawer on a disk, delete unwanted files, and check a disk to find out how much space it has left.

When drawing pictures and designing icons, it's more than likely that you'll go through a number of revisions or variations before settling for a final image.

Brush bonanza

Brush operations are the second area where Picturesque shows its quality. All operations are fast and smooth, and would show up many commercial paint programs. Try the stretch function if you don't believe me. It works just as in Dpaint and is just as slick.

All in all, Picturesque's only major limitation is that it does not support interlace. This is because AMOS itself doesn't allow interlace, though it soon should.



The sprites options are quite comprehensive

Flexible zoom

When you click on zoom, you are given a three-way split screen with the main magnified image in the middle and two smaller pictures on the right-hand side. The top one is a half-zoom representation of your picture, and the bottom one is a zoomed-out image.

Using these you can see with ease any changes and how they affect the look of the whole picture. The buttons on the zoom control panel will scroll the magnified area in four directions, increase or decrease the magnification, or set sprite hot spots. As yet, the magnify option supports only freehand dotted drawing, but shareware registered users can hope to see this enhanced before long.



You might find the zoom function a little slow when scrolling the area around, but the speed of operation is reasonable considering the program was written in AMOS, and just as good as many a commercial package I can think of.

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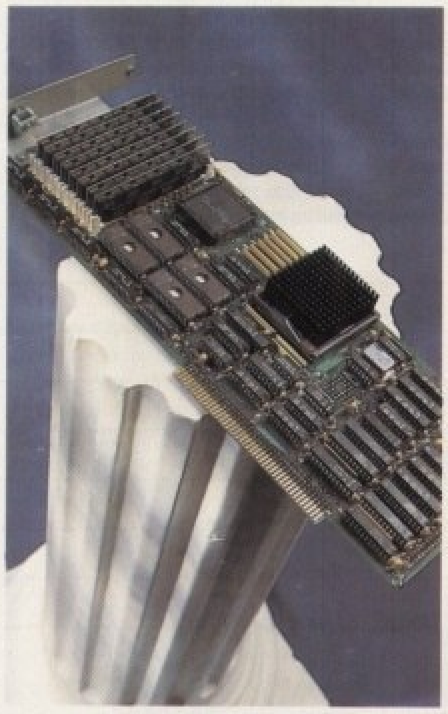


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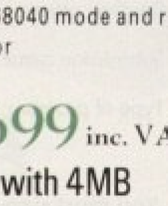
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The Directory Manager

Author: Chris Pettet

TDM is a directory utility along the same lines as SID and Disk Master. It has fewer features than either of these programs, but as a consequence it is smaller and easier to use. This makes it a prime candidate for squeezing onto your Workbench system disk, and should present beginners with few problems.

Devious devices

On loading, the program shows a fairly standard directory manager screen, with two large windows and a selection of gadgets to click. The first thing you'll notice is how neat and presentable the program is, with its 3D look, sensible use of colour, and no-mess gadget strip.

The central gadget strip is where all the action takes place, but nothing can be done here until some sort of directory has been loaded. To do this, click on one of the windows to activate it then on the device you'd like to examine from the list at the top of the strip. If you'd rather go straight to a particular directory, you can click in the strip above the window and type in the path as you would in Shell.



Once your list has appeared you select a file by clicking once on it. The file will be highlighted with a small green arrow to one side. Now that the file is selected, you can apply any of the operations available through the gadgets.

Copy, rename, move, and delete are the most common of all AmigaDOS commands used, but you can also add comments to a file, set its protection bits, make a new directory in the current directory, or print files. You must, of course, be using a disk with the correct print files *in situ*, and must be attempting to print an Ascii file.

All change

If you don't like the set of devices we've used on the gadget strip (SYS:, DF0:, DF1:, DF2:, and RAM:), you can add your own. Click on the thin blank strip above the top gadget and you flip to the other five selectable devices. These will all be set to SYS: at the moment, but they're easily changed.

Press the D key and a list of device gadgets will appear. You can now set these to any device or logical device set up with an assign statement. Click on OK to go back to the main program and press W to write these device preferences to the config file found in the CoverDisk's S: directory.

For a fuller explanation of TDM's features, see Chris's documentation on the CoverDisk.



SwapCols

Author: Paul Hammant

SwapCols snatches the prize for being the first program received at this office designed specifically to work on the A500 Plus. As any Plus owner will tell you, Workbench 2.0 icons are annoyingly reversed. The shabby blue and dirge-grey equate roughly to the bright blue and yellow of Workbench 1.3, but white and black have been reversed.

This means Workbench 1.3 icons look decidedly odd when used on a WB2.0 machine. You could go to the lengths of changing the A500 Plus palette back to the original 1.3 colour scheme or you could retain your new colours and change the old icons instead.

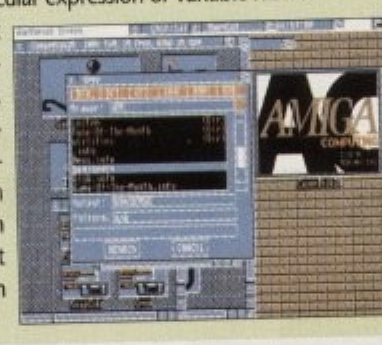
To use SwapCols, click once on the SwapCols icon then twice on the icon to be converted. If you have several to change, just hold down the Shift key while selecting each of them with a single click. Double click on the last icon to start the conversion process. Dead easy

GREP

Author: Huzaifah Zainon

Primarily for programmers, the Global Regular Expression Search and Print utility (GREP – phew!), is designed to make life a bit easier when you've generated a huge source code file and you need to find a particular expression or variable name.

Using it, the programmer can select a set of text files, specify a search expression complete with GREP's own flexible wild cards, and the program will produce a file containing all instances of the expression it managed to find, complete with the lines in which they occurred. This not only helps in tracking down rogue sections of code, it also enables the coder to see an expression in the context it appears in the listing.



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If you ensure your program is as compatible as possible with a wide range of Amigas, it will also stand a better chance of publication. We are especially interested in programs designed to work with the A3000, although if they work only with the new machine they'll have to be quite small.

We are prepared to pay our current rates for original work which hasn't been distributed in any other way and which has not been put in the public domain.

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Unfortunately we cannot undertake to return disks sent to us as the volume of submissions makes this an impractical exercise.

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Programs which have starred include FixDisk 1.2, KDVIII, Amiga Tanx, MED 3.00, FastCat, Llamatron, X.F.I., Defenda, JMenu, ShortCut, Rollerpede, Hunter, Grammar, Klondike, EYE, and Huge to name but a few. If you're a programmer working on an Amiga title, and you'd like it launched in the best possible way, you know where to find us.

In 1992 we will continue in the same vein, and hope to bring you more of the best available. Watch this space, all you connoisseurs of excellence, and keep an eye on what is quite simply the best CoverDisk in the business.

Our promise

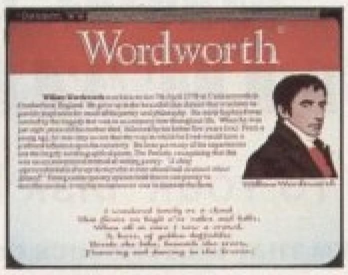
- We will ensure our disk works on as many types of Amiga as possible.
- We won't fill up the disk with five-minute-wonder playable demos of commercial games.
- We will strive to meet the demands of our users for particular types of program. It is your disk, after all.
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- We hope you stay with us and carry on enjoying your Amiga as much as we enjoy ours.

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The graphical nature of Wordworth® makes producing documents faster and easier. The WYSIWYG display shows exactly how your printed document will look, different fonts, styles and sizes, headers and footers, graphics and so on.

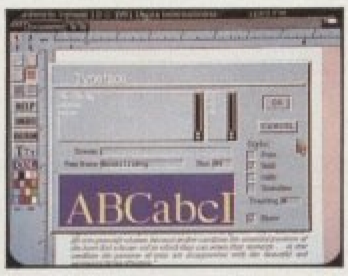
Commands are grouped under a series of pull-down menus, accessible either by the mouse or keyboard. Frequently used commands have on-screen icons, including Help, should you need it.



Experience the look and feel of the new and exciting WB2 (even if you use WB1.3). Each document is a separate multi-tasking window, which means you could for example, print one document while editing another.

Digita's® innovative *Human Interface Protocol*™ is incorporated setting a new standard in speed, style and elegance. "It *HIP*™ system is intuitive and a pleasure to use." – thank you Amiga Shopper, it's nice to be appreciated.

Graphics have always been the Amiga's strong point. Now it's better than ever. Pictures from Deluxe Paint can be placed in a document, and then sized, scaled and dragged (text automatically reformats around the image).

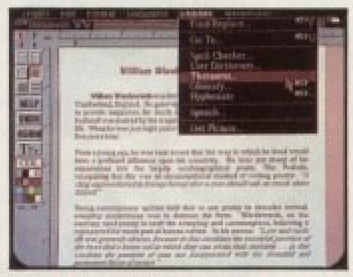


Wordworth's enhanced fonts will give you the very best printed quality. You can also print special symbols, such as boxes, arrows and so on. Better still, you can mix graphics, Wordworth's enhanced fonts, Amiga fonts, Colorfonts and your printer's own internal fonts, all on the same page. There's even a driver for Postscript printers.

You needn't worry about your existing information – Wordworth will let you open documents from most word processors, including Kindwords, Protext and Wordperfect (you can also mailmerge with Superbase).

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Wordworth is written in the UK by Digita. Which means you'll be using an English Collins spelling checker and thesaurus, and you'll know where to come for professional support.



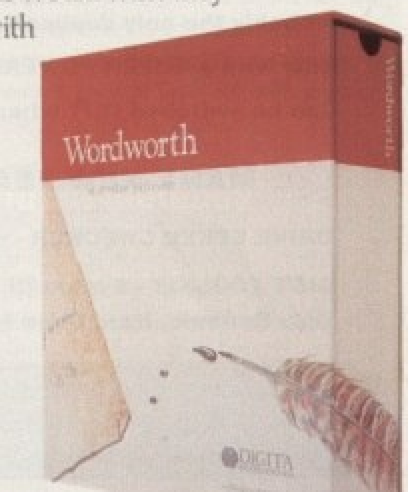
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Summing up, Amiga Shopper said: "Pounds-per-feature no other Amiga word processor comes close. Wordworth is what every owner of Kindwords would wish they had." Dreams become reality with Wordworth.

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Quick on the DRAW

Computer-Aided Design is an area where the Amiga outshines other machines. In the first of a two-part feature, Stewart C Russell begins his round-up of some powerful software

With its fast graphics and low price, the Amiga makes a wonderfully inexpensive Computer Aided Design, or Draughting (CAD) platform. For quite a while, CAD was high on Commodore's priority list in its educational strategy. That enthusiasm seems to have waned a little, but some superb systems were helped along by that policy.

Add an accelerator board and a de-interlaced display to your Amiga, and you have a system capable of competing with the very best at a fraction of the price. You don't believe me? The biggest exporter of CAD packages in the UK just happens to have its roots in the Amiga market. Some large companies have Amigas in their drawing offices, because for rapid redraws they cannot be beaten.

So here are four of the top Amiga CAD packages. None of them are toys, yet they run on what most people think is a games computer. It just goes to show that most people are wrong...

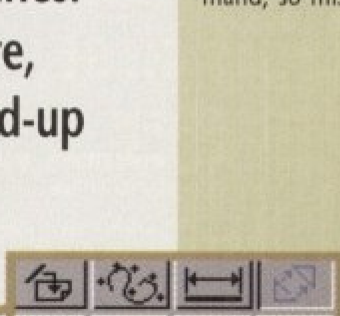
The great contenders

Four CAD systems are reviewed here, ranging from under £100 to over £750. All of them are capable of producing good, accurate drawings on dot matrix printers or pen plotters.

Starting from the high end, DynaCADD offers complex 2D and 3D facilities presented from a graphical shell. DynaCADD is well established in the PC and Atari markets, but we will see how it fares against Amiga-developed programs.

Coming down a notch in price we have X-CAD 3000, a new release from ➤





DynaCADD in 2D mode. Note the large array of tiny icons, and the greeked text to speed up screen update

Of mice and menus

Mouse

All systems use the mouse in some form or another – DynaCADD and Plans use the convention used by AutoCAD, where the right mouse button finishes or cancels a command. The mouse position with these systems is given by full-screen crosshairs, which are very useful for aligning entities by eye.

In contrast, the X-CAD programs use a normal mouse pointer in the shape of a cross. This makes manual alignment difficult, especially on a hi-res screen, as the mouse pointer sprite is always displayed in low resolution.

Menus

There is no standardisation in menu handling, either. DynaCADD uses "icon pads" which change according to the command chosen. For example, to insert text one would activate the Insert icon in the main pad, then activate the Text icon in a subsidiary pad, and then choose one of the text entry modes in a third pad.

There are 60 of these icons arranged in a vertical strip one quarter the width of the screen. Consequently, each icon is very small, requiring extremely good eyesight to tell them apart or even to work out what they represent at all.

DynaCADD does have one great advantage over any of the other packages – a built-in scientific calculator. All of the other systems require you to have a calculator handy for those difficult sums. Calculator output is directed straight into the current command, so mistyped numbers are a thing of the past. For packages coming from the same publisher, it's strange that X-CAD 2000 and X-CAD 3000 use different menu systems in their 2D editors. 3000 uses a large horizontal text menu, containing every possible command root. Selecting a menu item brings up a smaller menu of subsidiary options and so on, until the command is complete.

X-CAD 2000 has a series of menu "trees" which show all available options in clear type, and other options ghosted. This is an extremely flexible system, especially when combined with user defined vertical menus, which allow a small degree of customisation in the package. X-CAD 3000 can mimic 2000's menus through user defined dynamic menu trees – producing these trees is quite complex, however.

Since the same program is used as the basis of the X-CAD 3D editor, the menu system is a straightforward vertical menu. My only criticism is that it can be rather slow to respond to commands – apart from that, its use is self-evident.

All X-CAD modules use a system called IDENTS (Interactive Digitise and Entity Selection) for entity selection. It combines absolute co-ordinates, relative co-ordinates, object snapping and object masking in one very powerful menu, accessible by all commands.

Plans has few of these refinements. It uses standard Intuition menus with keyboard short cuts and function key modifiers. Numeric input is placed in a large requester which shows all the current settings at once, and allows any or all of them to be changed. The system seems very strange at first, but with practice becomes quick and flexible.

Other input methods

DynaCADD and the X-CADs (sounds like a late seventies punk group) can be driven almost entirely without a mouse by typing abbreviated commands at the keyboard. X-CAD echoes what you type to a small console window at the bottom of the screen, but oddly DynaCADD does not. Very experienced CAD users tend to use keyboard input for most tasks, so DynaCADD isn't doing itself any favours by hiding the commands you type.

X-CAD 3000 supports input by two other means. It directly supports the Cherry and Summagraphics digitising tablets, and comes with an auxiliary utility to design input "buttons" on these tablets. If you can afford a tablet, they are the best input method – by far. Existing drawings can be traced, frequently used commands can be programmed into one puck movement, and all (apart from the magnetic field generated by these pads) is sweetness and light.

If you want to be really non-interactive with X-CAD 3000, you can input commands from a text file. This would be a desperately tedious way to input a whole drawing, but is useful for changing the working colours, or setting up a standard drawing border.

Applied Vector Technology Ltd. X-CAD has been around in various guises for many years, but this is the only version to combine 2D editing with 3D surfacing features.

Originally designed to fit the educational/hobbyist market, X-CAD 2000 is probably the cheapest 3D CAD system available anywhere. Although it doesn't have some of its stablemate's more advanced features, it still offers very solid features at a very attractive price.

Both X-CAD packages use an external 3D editor, with the majority of the work being carried out in 2D and later joined together as 3D entities. This system keeps the size and speed of the 2D editor reasonable, but causes delays when adding that extra dimension.

You may still see the older X-CAD products (X-CAD Designer, Professional and 2D) floating around. They're worthy, but have been fully replaced by the new packages. X-CAD 2000 is basically Designer plus some 3D and a little extra. X-CAD 3000 is essentially X-CAD Professional plus all of the X-CAD 3D system.

Raw speed

Lowest in cost, but certainly not in ideas, comes Plans. This particular system started off as shareware more than three years ago, but has been revised and expanded into a very competent commercial 2D draughting system. Never before reviewed in a news-stand magazine, Plans has some real surprises in store.

The main reason for the existence of CAD is time saving. Editing traditionally produced drawings is a slow and difficult process, but electronic paper doesn't leave any eraser marks.

Ideally, we would like screen redraw times to be as low as possible, so that the machine does not intrude upon the creative design process.

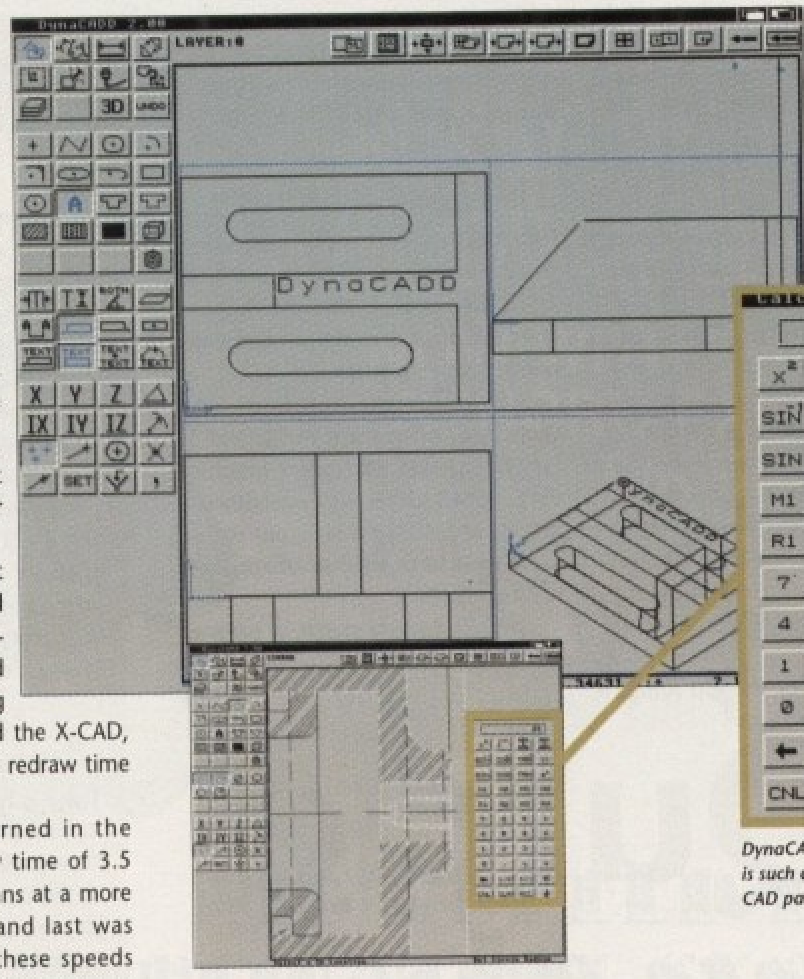
It would also be nice if the package could do its design calculations as quickly as possible, but this depends more on the computer power, rather than on the cleverness of the CAD author. Basically, you can't change that unless you buy a quicker machine.

Since Plans does not support 3D, a 2D speed test was used. A fairly simple drawing was imported into each package (using DXF with DynaCADD and the X-CAD, HPGL with Plans) and the redraw time noted.

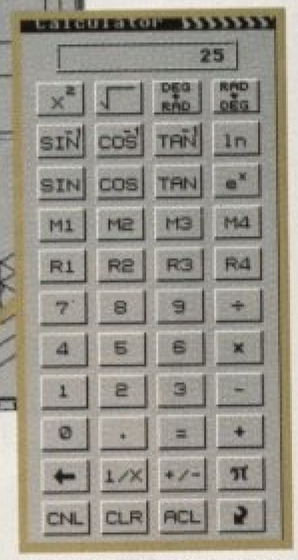
Both the X-CADs turned in the rather impressive redraw time of 3.5 seconds. Next up was Plans at a more pedestrian 6 seconds, and last was DynaCADD at 6.3. All these speeds were taken from a rather wheezy A500 with a plain vanilla processor.

Three-dimensional work is slow, especially where surface calculations are involved. With large models on a 68000-based system, the redraw time can be minutes. My advice would be to stick to simple 3D line entities if you have anything less than an A3000. X-CAD 2000 specifically misses out on 3D surfaces to keep its complexity (and price) down while keeping its speed up.

The conclusion? More money spent doesn't necessarily guarantee more speed, but a fast program will return much better value in the long term – time is money for everyone.



DynaCADD's 3D mode, with three orthogonal projections and one isometric projection updated simultaneously



DynaCADD's scientific calculator is such a good idea that every CAD package should have one

Text and dimensioning

This is the only entity creation part of the draughting process that will be dealt with in any great detail, for all the systems reviewed have an adequate toolbox of lines, arcs, curves, hatches and whatever else is required to make up a drawing.

Text, however, is much more specialised. It used to be that CAD people were happy with the default font built in to the plotter, but now more refined fonts such as Times-Roman and Triumvirate are the norm.

DynaCADD has stunning text support. Not merely does it have some beautiful fonts licensed from Compugraphic, but it has a minimal text editor built in. Add to that a good number of text sizing and placing modes, and you have something very, very special.

Ditek have even addressed the fact that complex fonts take a while to draw, so are crossed out (or greeked) at small size on screen. In the unlikely occurrence that you get bored with the supplied fonts, a rather neat external vector font editor is supplied.

Dimensions are particularly cute in DynaCADD. All the options are presented in a large graphical requester, which shows small examples of each dimension type. You pick the one you want, add any tolerances, and stick it on to the page. Neat.

X-CAD 3000 supports multiple fonts, although the range is not nearly as nice as DynaCADD's. Fonts can be edited within the program by drawing out a matrix of characters on a page and saving that out as a complete font.

Text handling in X-CAD 3000 is more than adequate for most applications. A particularly neat feature allows numeric labels to be incremented as they are inserted onto a part – perfect for pinout labelling.

X-CAD 3000's dimensioning is every bit as capable as DynaCADD's, but all ➤

Try the tutorials first

The first thing that every CAD user should do is read the introductory notes, and work through the tutorial. Tutorials tend to be very simple, but they do give a valuable grounding in the way a package works.

DynaCADD has an extremely thick (470 page) A5 manual. The first 50 pages are given over to two tutorials, which are well laid out and explained very clearly. Unfortunately though, both contain the same glaring error.

The tutorials claim that entity copying is switched on from an entry in the "Tools" drop down menu, but it is actually toggled from an icon. This error occurs throughout the manual, and is only mentioned in an easily-missed entry on a ReadMe file.

The rest of the DynaCADD manual is given over to command reference and appendices detailing external utilities and support files. Port-over problems are apparent – drivers are mentioned which don't exist, screen displays are based on Gem for the PC, and index entries point to missing features. To be fair, most of the manual is very clear and helpful, but it's the little points that annoy.

The saving grace of DynaCADD's documentation is its excellent context-sensitive online help. It suffices when the manual is out of reach, although it could use better (keyboard) controls rather than just using the mouse.

X-CAD 2000 and 3000 are very new – so new that the manuals weren't complete at time of writing. The new manuals are based on a mix of the existing Designer, Professional, and 3D documentation. From past form they should be reasonable reference material with short tutorials, but nothing truly bad or deeply marvellous.

X-CAD 3000's online help is called up by prefixing a command with an exclamation mark. It is powerful enough to live with, but not as complete or nicely presented as DynaCADD's help facility.

Plans has the smallest manual of the lot. At under 60 pages in small format it's almost a booklet, but it still manages to explain every function in adequate detail. The tutorial is just over three pages long, giving the very basics of entity input. You may have to experiment a little before you get to know the program, yet the manual is still essential reading.

In summary, DynaCADD's documentation is good but flawed, Plans' is OK if rather short, and the manuals for both X-CAD systems are probably adequate, but not yet finalised.

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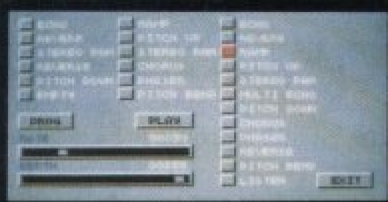


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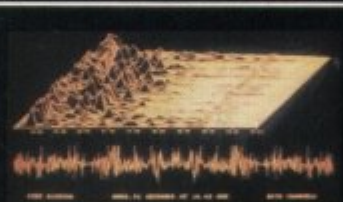


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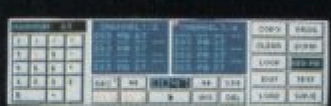
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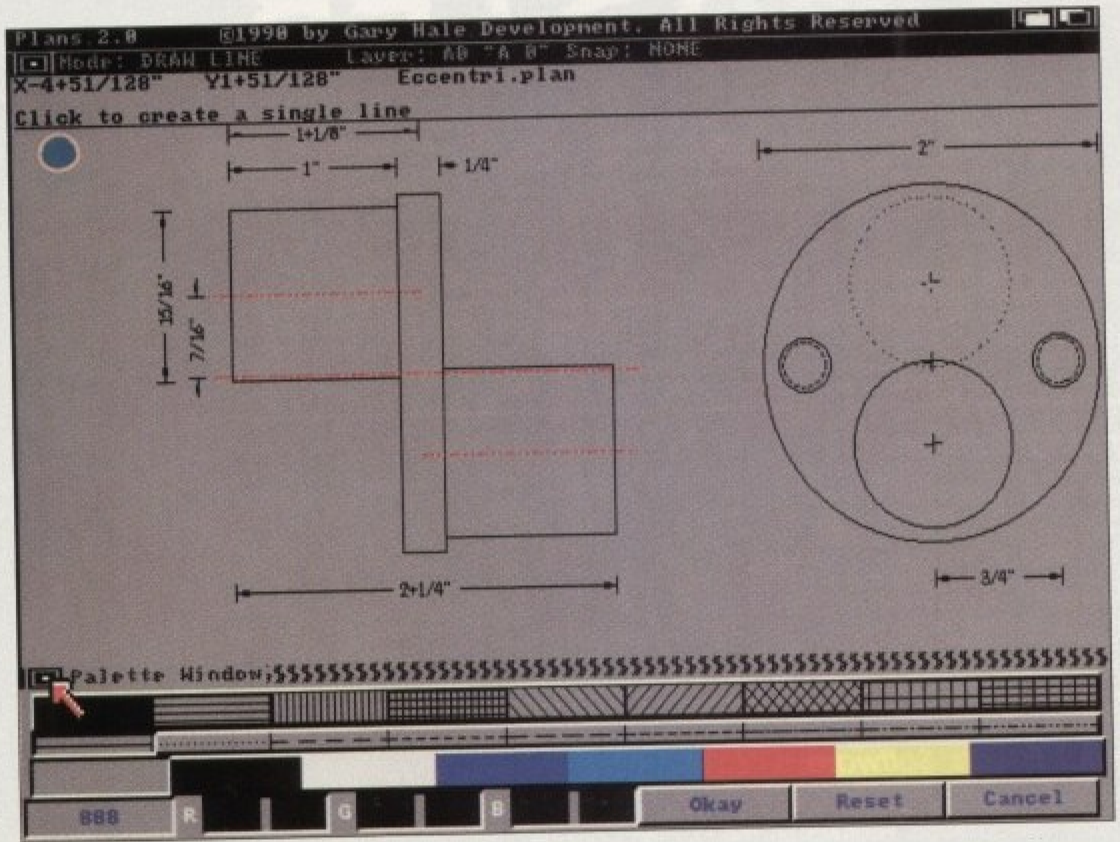
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Plans may have a fairly limited range of line and hatch patterns, but it's the only package which represents them all in a single requestor

the parameters have to be chosen from text menus. While it won't take long to learn these menus, it's nowhere near as intuitive.

Text management in the lower budget programs is less sophisticated. X-CAD 2000 can only use one very plain font, but has fairly powerful text placement and sizing commands. Plans can make use of user-defined fonts, but the text placement commands are limited to simple size, justification, slant and rotation manipulations.

Neither X-CAD 2000 or Plans can handle tolerances, but the former has all the main dimensioning commands found in 3000. Plans has very rudimentary linear and angular dimensioning, but these are really all that are required in a 2D package.

My review copy of Plans does not automatically apply dimension lines when measuring – the dimension line has to be placed manually, and the leader lines added later. This has been fixed in v2.1, so you will get neat dimensions if you buy the package now.

3D support

We in the UK are supposed to be metric (FX: muffled sniggering from the engineering industry). Plans hails from the United States, where they use English units, which really means Imperial units. Confused?

The upshot of this is that metric units are of secondary importance in Plans. If you want to use them, you must supply a negative value for the dimension precision. Just one of these things we have to live with, I suppose.

Plans doesn't support 3D at all, although you could use its isometric primitive shapes to fake depth if you were really determined.

DynaCADD, on the other hand, has 3D support built-in to the main editor, which supports multiple views on one page. With judicious use of this system, the traditional "three views plus auxiliary" can be drawn simultaneously. Or, if running on a 68000 machine, while you wait. This kind of drafting isn't light on CPU time.

Every DynaCADD 2D entity can be drawn in 3D, and extruded or swept round a path to create surfaces. The only limitations on what can be created are storage, processor time and your patience.

X-CAD 3000 is only slightly more limited than DynaCADD. Lines, arcs and points are the only entities common to the 2D and 3D editors, while surfaces can be planar, curved or solids of revolution.

This covers just about everything that can be manufactured, so the limitations are not great.

Two-dimensional features created in the main editor can be added on any construction plane, then the features worked on as desired.

The resultant surfaces can be rendered in a fairly crude manner to give some idea of the true appearance. Sculpt it ain't, but it does the job adequately and quickly.

X-CAD 2000 has simplified 3D support. The number of construction planes is limited and surfaces are also not supported at all. At the price, any 3D support is an excellent deal indeed.

● *In part two next month, Stewart C Russell looks at import and export features, user support and much more, concluding with the definitive Amiga CAD package verdict and buyers' guide.*

A question of standards

Intuition's Preferences printer routines are much maligned. They work – if a little slowly – with just about any printer to a reasonable degree of accuracy.

Plans is the only program to use Preferences for its dot-matrix output, and the results are as good as you'll get out of any CAD system. The tricky bit is actually dealing with the Preferences program itself – the printer entries are not well documented, and worse still, are biased towards US paper sizes.

Some Preferences drivers – notably the HP Deskjet and Laserjet – are not capable of outputting to a full A4 page, so you may have to use a larger border with these printers.

X-CAD 2000 uses the "any printer you want as long as it's Epson compatible" approach. Although it is limited to 72 dpi on a 9-pin Epson and 180 dpi on a 24-pin, the results look good because the dots are square rather than oblong.

X-CAD 3000 is a little more flexible, but only just. In order to create a dot matrix printout, one must first create a raster plot file at the correct size and resolution. This file can be filtered through a driver to get hard copy on the printer.

This would be a great system if there were more drivers. Only the Epson dot matrix and HP Laserjet monochrome printers are supported, plus the (expensive) Xerox 4020 colour inkjet and the (very expensive) Mitsubishi G500 colour thermal transfer printer.

The first two drivers cover at least 95 per cent of the world's printers, but it's the five per cent left out that make all the noises about incompatibility. DynaCADD uses custom drivers for its dot matrix drivers. Only a few are supplied with the package, but others are available from the supplier. As shipped, you get Star 9-pin, Epson 24-pin, HP Laserjet (which also works with the Deskjet) and Roland drivers.

Curiously enough, DynaCADD can also output IFF pictures at up to 300 dots per inch via one of these drivers. It's also the only program to support background plotting directly, and also output to a PostScript device.

The PostScript output was particularly well formed, but then again, most output from a really good laser printer looks good. DynaCADD also claims to output to Encapsulated PostScript for DTP use – this it does, but it fouls up the actual size of the drawing in the clip.

The net result is usually a tiny little drawing in a great big empty box – a shame, really, because this would be seriously useful if it worked.

Plotter compatibility

It's all very well saying how nice a CAD package is to use, but the ultimate reason for using one is to produce drawings. If the afore-mentioned CAD package can do it quicker than drawing by hand, so much the better.

The traditional output device is the Hewlett-Packard compatible pen plotter, which comes in at the £400 mark for an A3 device. Needless to say, all the packages support a plotter of this description.

It's no great loss that X-CAD 2000 only supports this type of plotter, as they are extremely common. X-CAD 3000, however, is happy to send vector output to Hewlett-Packard, Houston Instruments and Benson plotters, and also to Kyocera laser printers.

DynaCADD and Plans support any kind of vector plotting language, as long as it can be typed into a configuration file. DynaCADD uses the very lavish Makeplot program to do this (or you can load one of the many drivers supplied), while Plans requires a couple of commands to be added in to the configuration file using a text editor.



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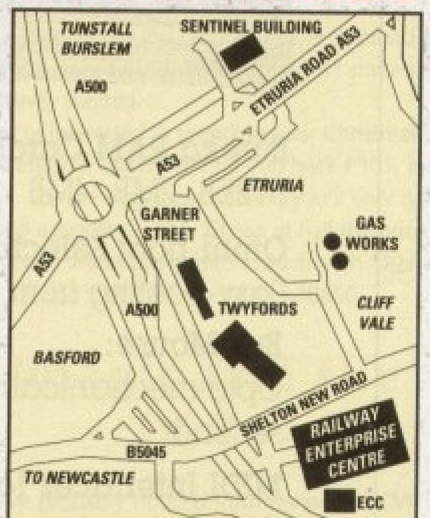
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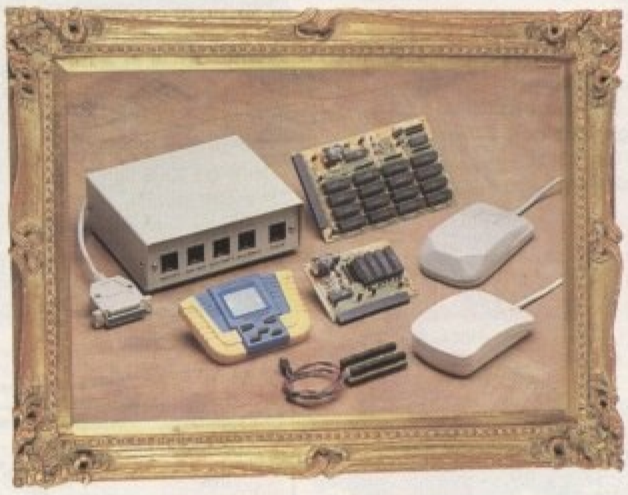
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AMIGA Update

The update trail continues with a host of 24-bit enhancements, the new Real 3D, plus the latest from the world of wordprocessing

Perhaps the biggest news in ray tracing has to be the release of Real 3D v1.4. With competitors like Imagine, something special was needed to stamp Real's authority on the market.

As a result v1.4 was born, with a huge array of very impressive additions. At the forefront of its expanded repertoire is the stunning selection of free form editing tools.

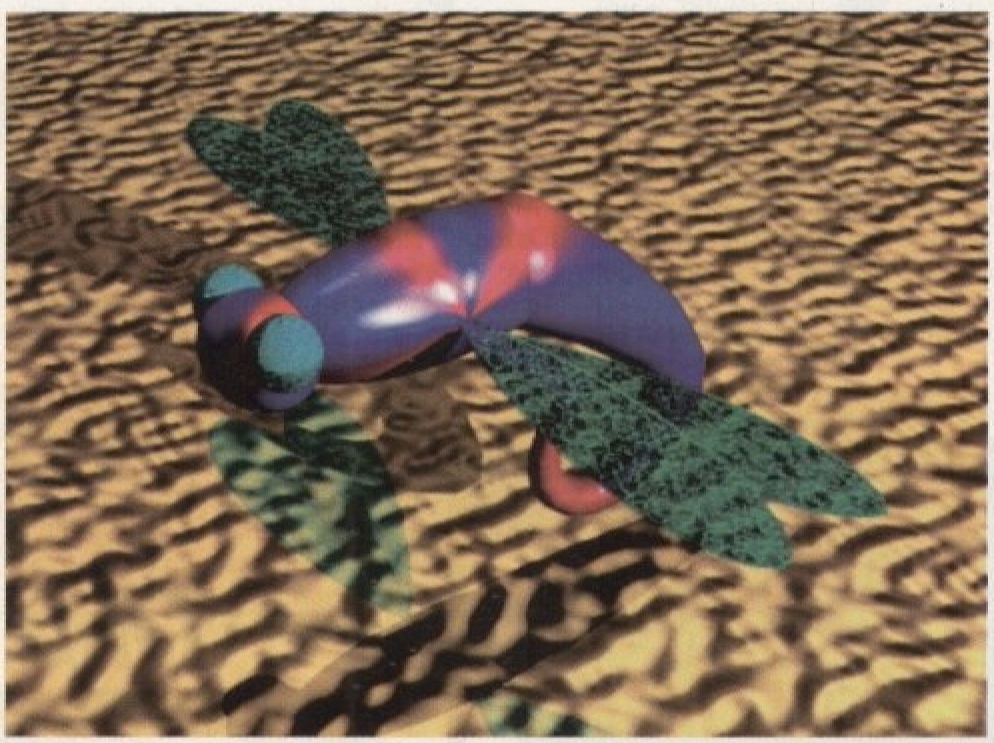
The new tools appear on the pull-downs and within the ever-expanding selection of onscreen icons. Using them makes the creation of irregular objects a dream. But the fun doesn't stop there...

Once created, these new organic shapes can be easily edited thanks to another long-awaited edition – point editing. Now Real can hold its own with Imagine in the only area in which it was previously outgunned.

Within the expanded modelling functions are a selection of up to 24 different ways of bending and twisting free form objects. Perfect smooth curves, hollow spirals, instant mountain ranges extruded from flat surfaces – in fact just about anything a twisted mind can imagine.

As you'd expect, there are two versions of the package. For the economy minded there's the standard version, which doesn't include the more sophisticated features such as the macro functions, Boolean operations and 24-bit output.

The professional package, however, boasts the full complement of features and contains a turbo optimised version that supports power processors such as 68020s, 68030s and 68040s, with or without maths co-processors. All versions require at least 1Mb of memory, but for professional users 3Mb are recommended – which funnily enough is exactly the same amount of space as the beast will occupy on your hard disk.



A superb example of 24-bit rendering

Apart from the structural differences between the two versions, there's the addition of extra ready-made materials, textures, objects and fonts, all packed onto the four disks of the Pro version. As the standard package boasts only two disks, the support material has been heavily slashed.

If you're interested in spending your Christmas cash, the professional version will set you back £305, including VAT. For the beginners' version you'll only have to cough up a piddling £110. Cheap at half the price.

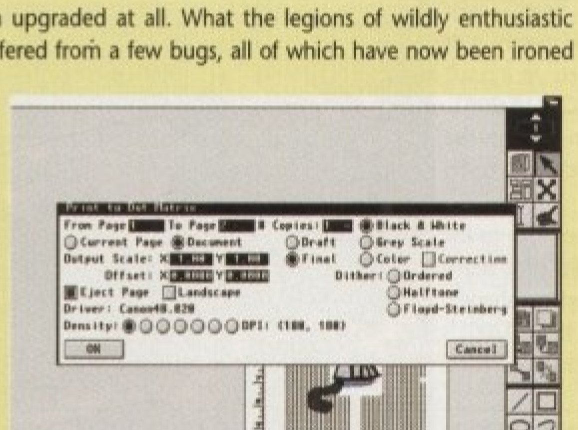
For more information get in touch with Alternative Image. Tel 0533 440041, fax 0533 440650.

ProPage bugs sorted out

It seems only a short while ago that Gold Disk released ProPage v2.0, which was immediately suffocated by the sheer weight of reviewers desperate to outdo each other in their wholesome praise of the package. So why the new version?

The secret is that ProPage v2.1 hasn't really been upgraded at all. What the legions of wildly enthusiastic reviewers forgot to tell you was that ProPage v2.0 suffered from a few bugs, all of which have now been ironed out.

The new version has a much smoother feel to it, and you no longer feel the need to save a document every two minutes in case there's a glitch or a crash. In addition, the print to dot matrix option is much improved. There is a landscape printing option, and a long-needed page offset control which, in combination, complete the printing options for those with dot matrix printers.



Apart from these changes, there's little to report, other than that possibly the best of the Amiga's DTP packages is now as reliable in operation as it deserves to be. Full marks to Gold Disk for taking a responsible attitude towards their product.

Gold Disk can be contacted on 0101 213 320 5080.

Imagic and the IV-24

As you've probably noticed from reviews of GVP's latest brainchild, the IV-24 graphics card – which will practically walk the dog, do the dishes and collect the kids – has one major failing, which is the lack of a decent paint package.

Macro paint, the package bundled with the IV-24, is a little sad to say the least, and as a result G2 Systems have stepped into the breach and are offering a version of their very own Imagic paint program, which presently resides solely on their own VD2001 24-bit graphics card.

The IV-24 version will follow the same format as it does within VD2001, with two complementary modules. The first is aimed at those interested in the basics of 24-bit art, and the second for the professional user. Of course, G2 will be happy to supply you with both, no doubt complete with a slight discount.

AMIGA Update

The price of the new package isn't yet decided but it's a fair bet that both packages will retail at around £350 apiece. A little expensive, but if you're serious about employing the IV-24 as an artistic platform rather than just a multimedia display board, it's a price you'll have to pay.

You can contact G2 for further details on 0252 737151.

ProWrite 3.2

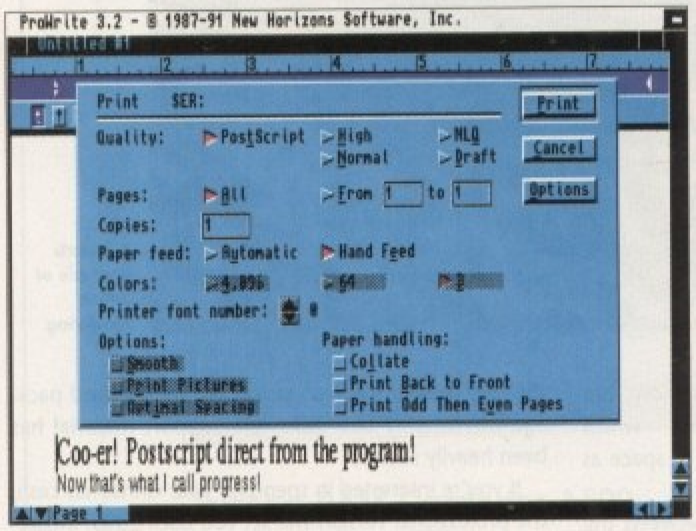
Users of New Horizons' wordprocessor have long suffered in silence while the likes of Protext, Excellence and the new upstart Wordworth stole the glory and the accolades of reviewers this side of the pond. With the release of version 3.2, this could change somewhat.

The upgrade follows similar lines to that of Wordworth 1.1 (see last month's Updates) in that PostScript is now directly supported from within the program. However, New Horizons have obviously taken a long look at ProWrite, and have set to rights some of the omissions from which ProWrite 3.0 suffered.

PostScript, being the language spoken by all self-respecting laser printers, has become the de facto standard for wordprocessors to aim for. It would have made its appearance in Amiga applications long ago were it not for the machine's market placing – firmly below the business field where laser printers are most commonly found. Nowadays, the Amiga's image has improved and software houses are trampling each other underfoot in the rush to embrace the standard.

Unfortunately, New Horizon's implementation of PostScript is not as neat as Wordworth's, though just as capable of producing the goods. There are only four PostScript fonts on offer, and page scaling is not present on the PostScript print options screen, though it can be found in the page setup screen.

This has its advantages, in that it forces the user to think about scaling before going to the print menu, but there really should be a horizontal and vertical scaling function on the PostScript options screen, and ProWrite still has no equivalent of Wordworth's rotation facility. In all, though, ProWrite v3.2's PostScript printing is a major improvement on previous versions.



ProWrite – the king of the Amiga processors

A second printing improvement taken on board by v3.2, and already found on Wordworth, is the High quality print option for owners of dot matrix printers. When this is enabled, ProWrite will use a font twice the size of that chosen by the user, then scale it down for printing. The result is text of a higher dot resolution and thus fewer jaggies. The option works as well as Wordworth's UltraPrint option (using the same technique), and for users with a denuded fonts directory, New Horizons are offering the ProFonts1 package, which has a variety of fonts and font sizes to make high quality dot matrix printing a bit easier.

A nice touch is ProWrite's automatic scaling of Workbench 2.04's Compugraphic fonts. If these are used in a document which is then printed to a dot matrix using the High option, ProWrite will use a double size font and scale it automatically, relieving the user of the need to check his or her fonts directory.

Together with its direct PostScript support, this places ProWrite in direct competition with Wordworth for the crown of the Amiga wysiwyg wordprocessors. However, I can't help feeling that it will lose the battle, as the program's other features haven't been upgraded with v3.2.

The overall look has been cleaned up, and now the program has a decidedly Workbench v2.0 feel to it, but the spell checker hasn't been improved and is still a bit slow for my liking, though Wordworth itself is quite a bit slower than Protext in this area. In terms of typing speed, there is little to choose between them.

Wordworth v1.1's support for built-in printer fonts and its more comprehensive use of PostScript give it a distinct edge in the user friendliness department. As it supports the direct loading of ProWrite documents (among others) and as Digita are offering a £40 price cut on trade-ins for your old wordprocessor, it still seems a more attractive buy.

For details about ProWrite (or any other New Horizons title) phone Silica on 081-309 1111.

Image information

All of the 24-bit images used in this month's Update section were rendered using Real 3D 1.4 and show some of the new free form and point editing techniques. These primary images were loaded in to the TVpaint and VD2001 combination for the finishing artistic touches.

TVpaint and G2 get together

As you may know, the Amiga Centre Scotland has long been the leading light in 24-bit applications. This is primarily due to their Harlequin board, which has been, and still is, the benchmark against which all newcomers are judged.

The resolution and flexibility of the board certainly make it special, but this isn't the only thing that put the Harlequin at the forefront of Amiga art. After all, any hardware is only as good as the software it runs, and fortunately TVpaint is very good indeed.

Until now, the package has ran exclusively on the ACS board. Great news for the Harlequin, but perhaps not so hot for the opposition. Fortunately, the Harlequin monopoly has finally been broken. As a result the best package in the business is now on offer to users of G2's VD2001.

At present, only v4 of the package is available, even though the Harlequin is already employing v5. If you're after regular updates, it could be worth enquiring about continued support for the board.

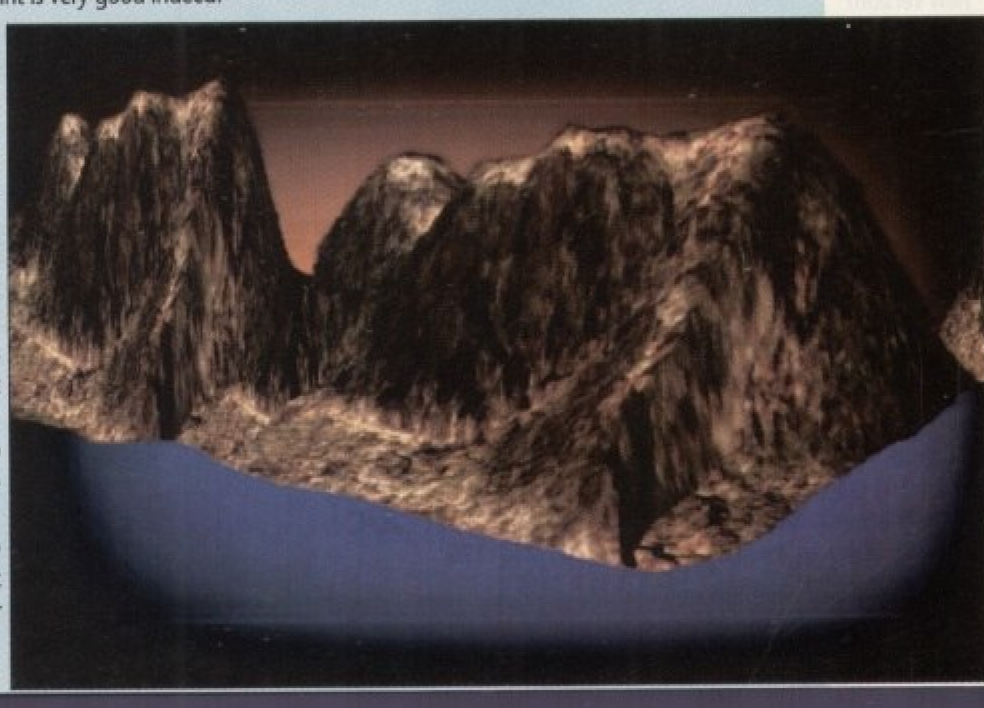
However, it's difficult to imagine much scope for improvement, as the present version has all the features of the original TVpaint plus brush mapping, which allows you to wrap any brush image around any shape.

The only noticeable omission is the lack of support for the VD2001's frame grabbing abilities. Unlike G2's own Imagic paint package, TVpaint can't grab direct from a live video source.

As a result, it does limit the package as a first choice, as you need to invest in module one of the Imagic system to employ the board's impressive grabbing skills.

Of course if you already have the ability to grab, an upgrade to TVpaint will give you a state-of-the-art videographic workstation that many a graphic artist or production company yuppie would eat his or her portable phone for...

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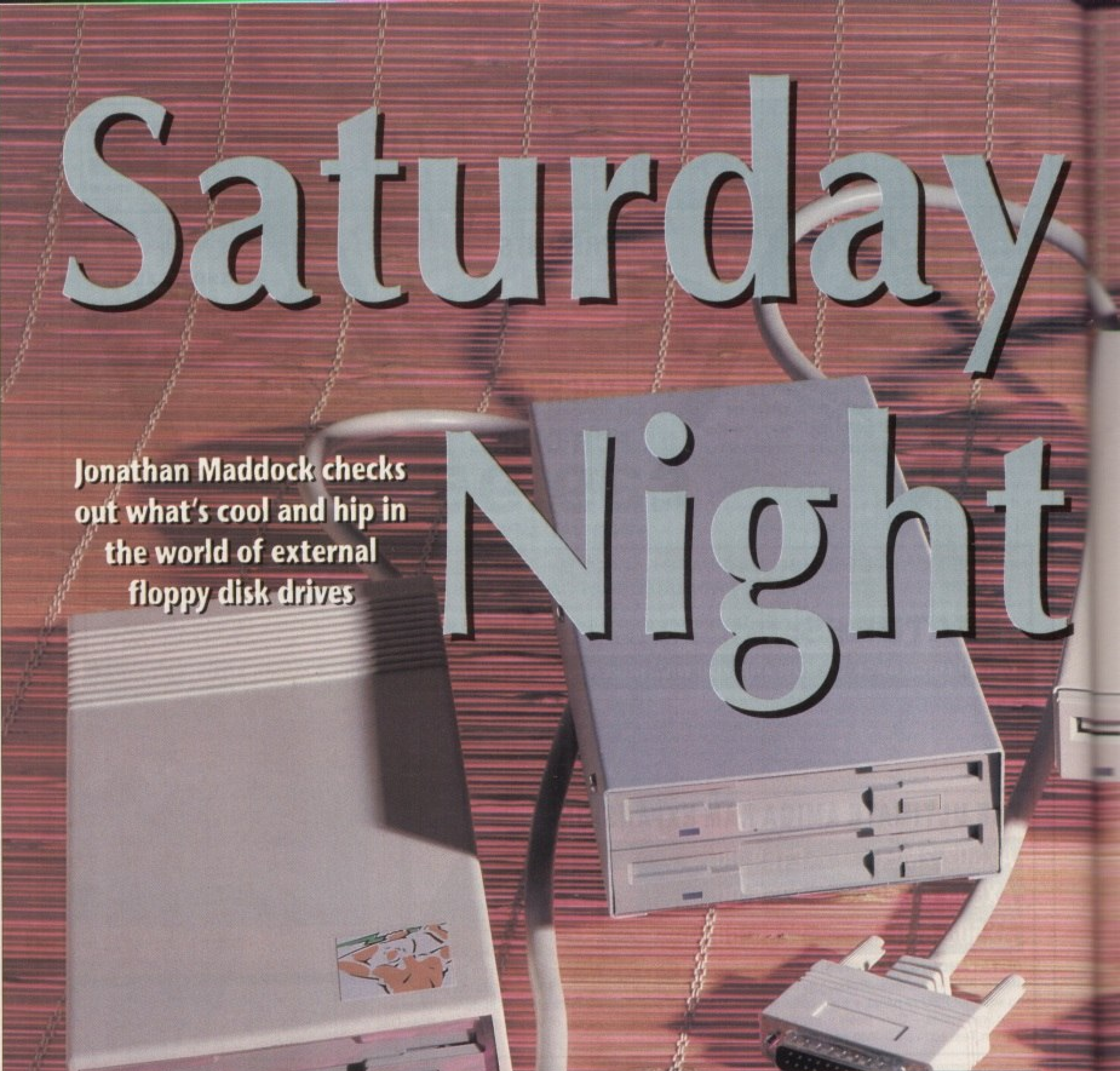
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Saturday Night



Jonathan Maddock checks out what's cool and hip in the world of external floppy disk drives

Golden Image 3A-1D

The first thing you notice about the 3A-1D is its unique two-digit LED track display which indicates the position of the maganite read/write head in the floppy disk drive. The reason for the track display is that, in theory, you can see a virus writing itself to the boot block of your disk.

To the beginner these digits don't mean a thing – they're just pretty nice to look at. But to someone who's got a bit of skill and experience and is always on the lookout for viruses, it's quite a handy gadget – but you should also ensure that you always have your virus checker at the ready and write-protect your disks – this will guarantee that you won't be troubled by the nasty little pests.

Normally size isn't that important, but in the case of external floppy disk drives it is a very important factor indeed. In fact, the smaller the better as far as I'm concerned, because with all the other peripherals on my desk there just isn't the space for any more bulky equipment.

Compared to other drives, the Golden Image 3A-1D is absolutely huge – very long and wide. The only reason I can find for this is that it incorporates the two-digit track display.

Included in the package is a large manual. This might seem strange at first – why does an external floppy needs so many instructions? – but it becomes blindingly obvious when you flick through it and find that it's in three different languages. So from a large manual you only get 14-odd pages of technical information. Who wants to read a book about external drives anyway?

In use, the 3A-1D performs very well. When you pop a disk into the drive, it detects its presence fairly quickly. The drive's noise level is quite low because it has been silenced by some anti-click circuitry. It also has a standard through port and an on/off switch.

It's nice apart from the huge size. It would be perfect for more flashy Amiga owners – you can impress all your chums with the usual "look my drive is better than yours, it's got flashing lights on it" boast.

To be honest, the track display makes it more interesting than most drives on the market, but is it just a gimmick? On the whole a good buy.

Price: *£59.99*
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Tel: *0386 7655500*

Features

Looks

Value

Overall

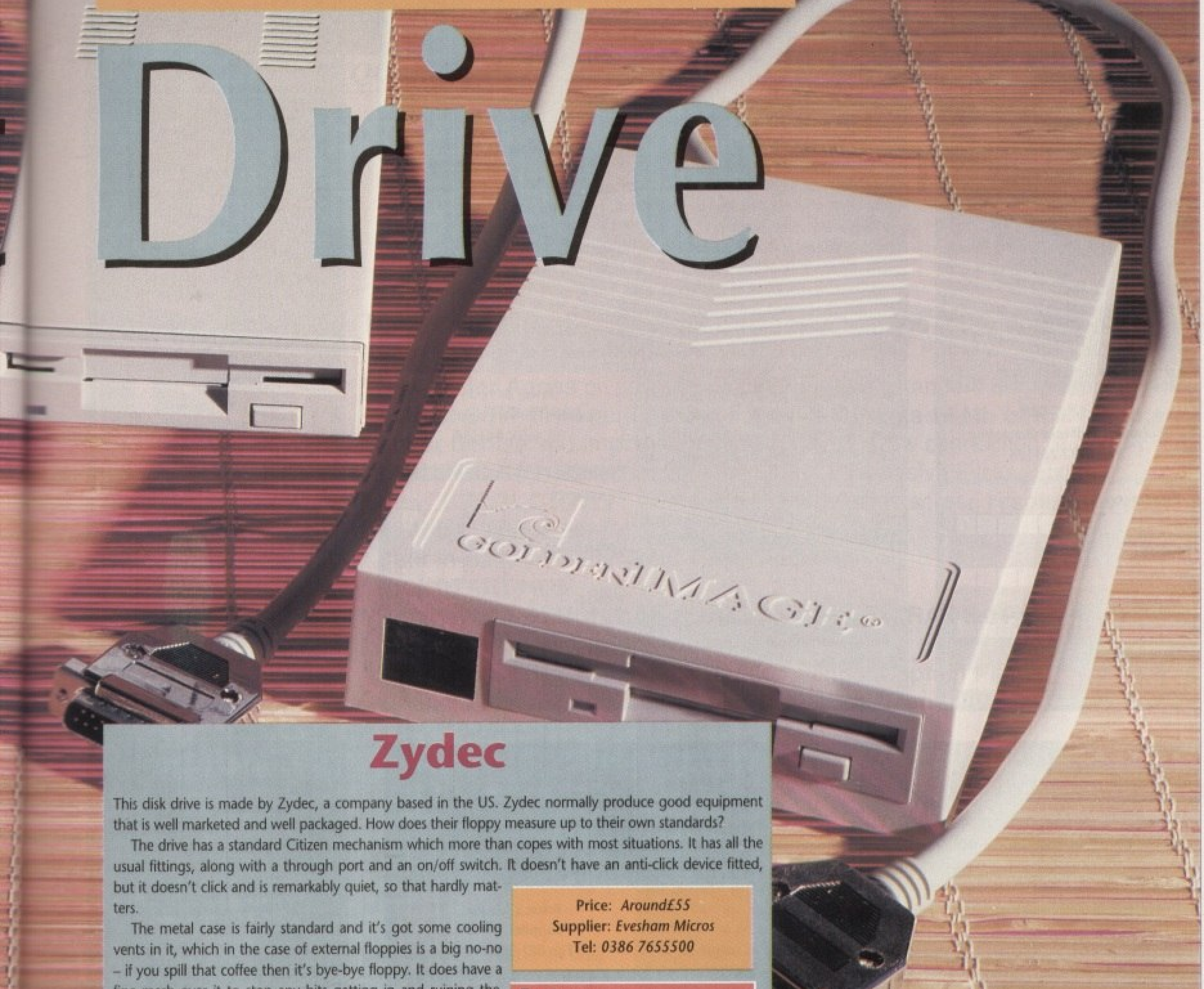
The thing most people hate about the Amiga is the amount of disk swapping that has to be done. This is most infuriating, especially when you are playing a game and you have to swap disks several times just to get to the next level.

All of these problems could be solved if only you had an external drive, but there are questions to be asked, like which one do I buy? Which is the best? And more importantly, which one gives real value for money?

Many of these drives have extra features like backup utilities (ahem) and anti-clicks which stop the drive clicking when there isn't a disk in it. Are these advantages or disadvantages? Are the drives well designed? If you accidentally spill your drink and it goes all over it, will it be safe? Also, be wary of the amount of power that some of these drives need. It's not too bad for anyone who owns anything but the A500, but if you do own an A500, then you must pick your external floppy carefully.

When using a program that takes a lot of memory, always remember to take out your external floppy because if you don't, even on a 1Mb A500, your Amiga will crash. Most drives these days have an on/off switch at the back, so you don't have to unplug your external when using a memory-consuming program. Almost every external has a through port built into it. If you have more than one external drive, this handy device let's you 'daisy chain' your drives together.

Drive



Zydec

This disk drive is made by Zydec, a company based in the US. Zydec normally produce good equipment that is well marketed and well packaged. How does their floppy measure up to their own standards?

The drive has a standard Citizen mechanism which more than copes with most situations. It has all the usual fittings, along with a through port and an on/off switch. It doesn't have an anti-click device fitted, but it doesn't click and is remarkably quiet, so that hardly matters.

The metal case is fairly standard and it's got some cooling vents in it, which in the case of external floppies is a big no-no – if you spill that coffee then it's bye-bye floppy. It does have a fine mesh over it to stop any bits getting in and ruining the drive.

It is really easy to use – just take it out of the box, flick the switch to turn it on, plug it in and then boot up the computer. However, it suffers quite badly due to a lack of gimmicks like anti-clicks and anti-viruses.

It doesn't really look that interesting in its rectangular box, but it does get the job done. If you are looking for a nice ordinary drive with no gimmicks then this might be useful to you. Overall, it's pretty average, and there are much better drives on the market.

Price: *Around£55*
Supplier: *Evesham Micros*
Tel: *0386 7655500*

Features

Looks

Value

Overall



Cumana

I found this drive perched on *Amiga Computing*'s features editor's desk. Cumana have been around for years and years and they've been making disk drives since I was in nappies. If you want a reliable but boring drive then the Cumana CAX354 is for you. You get the two main features – the through port and the lovely little on/off switch.

This reliable drive will last for ever and ever. According to our features editor, his clicks noisily with the best of them. I have been reliably informed that Cumana now make the drive with a handy anti-click device built-in, making it a lot quieter. You could possibly call it an Amiga internal drive that's been ripped out of the machine and used as a external.

It's a tiny bit expensive when compared to other externals, but as my mother used to say, shop around. You can normally get one of these for around £60 to £65 – if you have a good look around.

Boring it may be, but although it doesn't have any other features, it does do what you bought your extra drive for in the first place – be an extra drive – reliably and efficiently. The latest version is quiet (even though our old one isn't!) and is a fairly good buy. Average.

Price: *£74.00*
Supplier: *Ladbroke Computing*
Tel: *0772 203166*

Features

Looks

Value

Overall

Power PC880B

This drive contains more gadgets than Batman's utility belt (well, perhaps not that many). The PC880B has three modes, all of which can be selected with a handy little switch. In normal mode, it behaves like a perfectly normal drive. If you switch to anti-virus mode it automatically write-protects all floppies, including those in other drives.

This means that no data can be written to any floppies, so a virus cannot infect any disks at all. You still need to check for viruses, because the drive doesn't know what a virus is – it only stops a virus writing itself to one of your disks. A very good idea by Power that is well implemented.

The other main feature of the PC880B is the controversial disk backup hardware. This feature is called Blitz, and when used with the supplied software it will attempt to copy any disk and get past many forms of copy protection. It won't crack all protected disks, but it will backup many that can't normally be copied.

Now this is a very dodgy subject indeed. FAST (the Federation Against Software Theft) and games software houses want to see this kind of backing-up controlled. Remember, you are not allowed to back-up any software that isn't your own work. Personally I feel that the drive would be better if Power didn't give away such software.

The drive itself is quite long, but is nice and slim. It features the standard through port and on/off switch. It's very quiet because it uses an anti-click board. Overall the PC880B looks good, is quite cheap and comes with a clear and concise manual. As such it is well worth spending your hard-earned pennies on. An excellent buy.

Price: *£69.95*
Supplier: *Power Computing*
Tel: *0234 843388*

Features

Looks

Value

Overall

Roclite RF382C

Looking for an ultra-fast, ultra-thin, external floppy disk drive? Maybe you should look at the Roclite RF382C. This baby looks mean in every sense of the word. It's very thin indeed, in fact no thicker than a box of matches. For size you can't get much better than this.

The drive is made by Roctec, a new company who make floppies, hard disks, expansion cards and other such peripherals. A500 owners are in for a bonus because the Roclite doesn't take up much power at all.

If you are looking for a really fast drive, then this one is for you. It is almost twice as fast as your internal drive. There are no nasty holes in the sleek, black casing, so any spillages won't ruin it.

The drive is available in either Amiga ivory or in CDTV black. It has all the standard features such as the through port and the on/off switch. In use it performs very well indeed – it's quiet and fast.

Overall, this is the sleekest drive of all those on test, with its black casing. A good performer and the price isn't going to break your bank balance. Roctec is a name for the future, I think.

Price: *£59.99*
Supplier: *Silica*
Tel: *081-309 1111*

Features

Looks

Value

Overall

Power Dual Drive

Now this is a bit special. The dual drive from Power gives you the benefit of two external floppy drives in one compact case. It's quite heavy, but for a dual drive is very slim indeed. It has its own 5V DC power supply, so that the power is not drained from your Amiga.

The two external drives are independent and copying operations can be carried out between the computer and either drive or from one drive to another. Both drives possess the unique Power anti-click feature so that they do not click when empty.

It will operate as a standard read/write 880k external floppy drive, but like its single sister, the Power PC880B, it has the anti-virus and Blitz options.

Just as a quick reminder, the anti-virus function prevents write access to the boot block on all drives (including the internal). Remember, this function only prevents viruses from placing themselves on the boot block – it doesn't stop the blighters. So always use a good virus checker and, more importantly, always write-protect your disks. This drive also has Blitz – the dodgy backup/copy device. I don't really see the point in having this function as it just angers people like FAST. It also has the usual through ports and on/off switch fitted as standard.

Overall it's great. It looks good, it's a sensible size, and although it's a bit on the expensive side, you are getting two drives instead of one. A worthy buy if you can get the dodgy backup software off your conscience.

Price: *£120.00*
Supplier: *Silica*
Tel: *081-309 1111*

Features

Looks

Value

Overall

Conclusion

There you have it – what's hot and what's not in the world of external floppy disk drives. Whether you want a drive with loads of gadgets (Power PC880B) or you want a fairly cheap model (Zydec), or you want to be really extravagant (Power dual drive, Golden Image 3A-1D), the choice is yours.

I would recommend the Power PC880B because it's fairly small, very cheap and get's the job done. But don't forget that this is just a selection of drives – there are loads more available.

The market for drives, whether they be floppy or hard, is currently flourishing. With more and more development work on floppy drives and with better technology being made available, who knows what is in store for the Amiga external floppy disk drive? Things can only get better..

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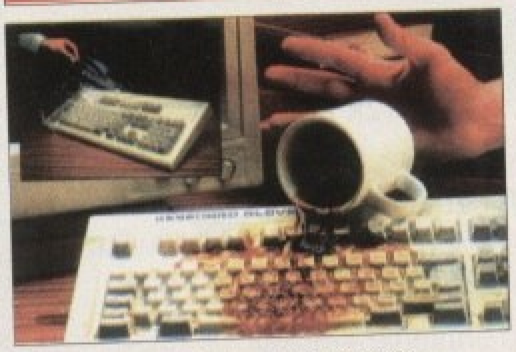
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ONword

A quick rub on our crystal ball and the future of Amiga is revealed. Spooky isn't it?



Turbo Charge

Still flushed from the praises lavished upon Last Ninja 3, System 3 are all set to unleash Turbo Charge on the unsuspecting public.

In Turbo Charge you take on the role of the now familiar "cop with a sports car" who finds that to restore justice and peace to the world he must "drive very fast and shoot people". You know the fella, he's always being told that he's "off the case", or that he's got "24 more hours to crack it".

Apparently, it features a "unique driving control" that makes Turbo Charge startlingly different from every other driving game in the world. It also asks that you "take care, take over, but be sure to take 'em dead or alive". And, no, we don't know what they're on about either.

Turbo Charge should be cutting up the traffic near you now. Price £25.99.

RoboCop 3 breaks the mould

Sod David Bowie, the original Tin Machine returns to our cinema screens in the New Year with a new actor, toned down violence and a rumoured PG rating.

A recipe for disaster? Could be, but the game's shaping up to be a right spanker. Breaking the mould of previous RoboCop tie-ins, the third instalment takes place in polygon 3D, not dissimilar to Driller and Castle Master. Quite how this will affect the gameplay remains to be seen, but there's no denying that it looks a treat. The metal mayhem is, as usual, from Ocean and should be hitting the shops any minute now. Price TBA.





Wild West World

Yeeeee-ha, and all that palaver. Yes, US Gold are all set to take you back to the dusty days of the Wild West, when men were men and Clint Eastwood mumbled a lot.

Taking the rather odd idea of a business simulation, but in a cowboy setting, the objective is to control the destiny of some wrinkly western dude and make his fortune by fair means or foul. You can opt for the "peaceful farmer", but he always gets shot by bandits in the first five minutes of most spaghetti westerns, or you can choose to be a "rootin' tootin' bandit", and get shot by Lee Van Cleef in the first five minutes. It's up to you.

It all sounds quite interesting really, and it should add a new twist to the rather stuffy world of business games. And hopefully plenty of people will get shot.

Wild West World is out early next year. Price TBA.

Agony

Once again, those fruity Liverpudlian lovelies at Psygnosis have pushed the graphical capabilities of the Amiga a little bit further. The guilty game? Agony.

In Agony (as you undoubtedly will be), you take the part of an owl remarkably like the one in the Psygnosis logo. Said owl must then flap through full screen, three-level parallax scrolling, 3.5Mb of graphics, 1.5Mb of sound and up to 144 colours onscreen at any time. No idea what all that means of course, but it sounds impressive.

Featuring the usual Psygnosis frills and spills, Agony should be out late December/early January, price TBA.



Die Hard 2

Even more film licensing, this time from Grandslam. Seeing as the original Die Hard game never made it any further than the consoles, we'll have to make do with the sequel.

It's Christmas, and John McClane's wife has done her usual trick of getting mixed up in a terrorist plot. So John (alias Hollywood mogul and bald funster Bruce Willis) gets out his gun, rolls around, gets mucky and swears a lot. A sure-fire box office hit if ever I heard of one.

The game looks to be a shoot-'em-up in the vein of Oppo Wolf and Predator 2, with oodles of violence and quips a-plenty from the perpetually smirking Brucie. Probably.

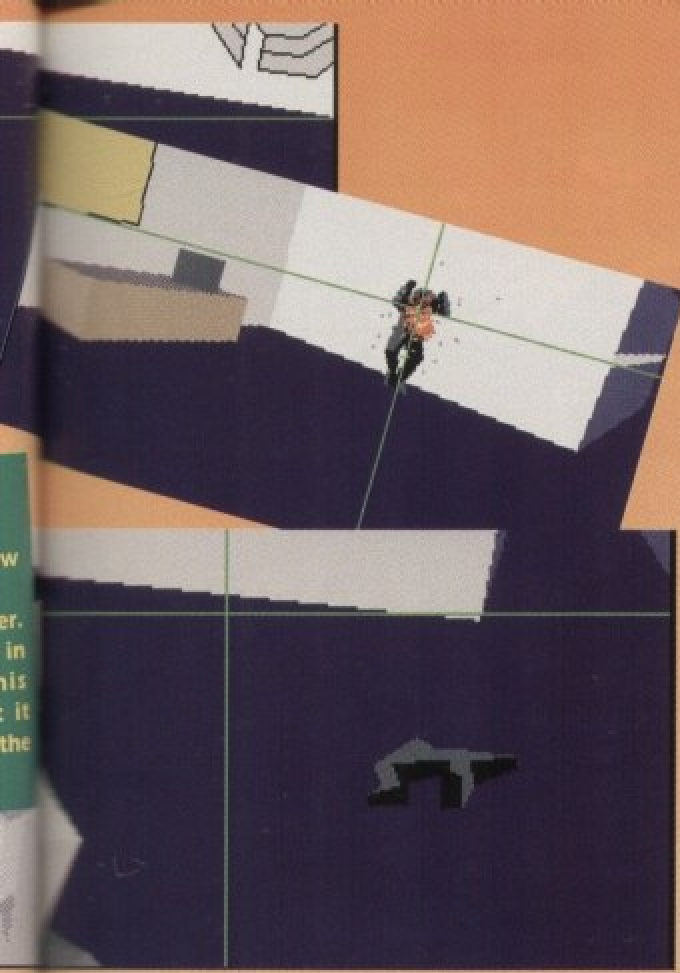
Die Hard 2: Die Harder should be out as you read this. Price TBA.

Humble pie corner

You may have noticed that some Gremlins got in the works last month, in more ways than one.

As well as buggering up the screenshots for Formula One Grand Prix, Baby Jo and James Pond, those pesky green critters tried to scupper the Alien Breed review. To put the record straight – Alien Breed is not by Gremlin at all, it's by Team 17. And it doesn't cost £29.99 it costs £24.99. So now you know.

Team 17's head honcho, Martyn Brown, has already demanded immediate castration for the person responsible so, for no reason whatsoever, we've decided to blame Biffa. And why not? We're sharpening the pliers at this very moment. Sorry about the slip up, normal service will be resumed as soon as we're finished with our unwilling scapegoat. Now, somebody hold him still...



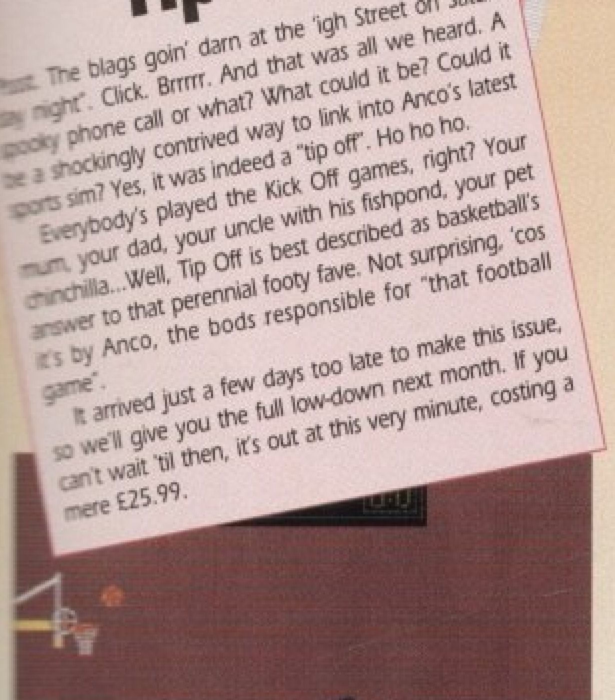


Tip Off

"Pssst. The blags goin' darn at the 'igh Street on Saturday night". Click. Brrrrr. And that was all we heard. A spooky phone call or what? What could it be? Could it be a shockingly contrived way to link into Anco's latest sports sim? Yes, it was indeed a "tip off". Ho ho ho.

Everybody's played the Kick Off games, right? Your mum, your dad, your uncle with his fishpond, your pet chinchilla...Well, Tip Off is best described as basketball's answer to that perennial footy fave. Not surprising, 'cos it's by Anco, the bods responsible for "that football game".

It arrived just a few days too late to make this issue, so we'll give you the full low-down next month. If you can't wait 'til then, it's out at this very minute, costing a mere £25.99.



GAMER

INNER VISION

Gamer contemplates its navel after stuffing itself with turkey

REVIEWS

REGULARS

Fuzzy Logic?

FUZZBALL

System 3 ▪ £19.99 ▪ 1/2 meg ▪ Joystick ▪ Out now



Drowning under a sea of Midget Gems may be the ultimate childhood fantasy, but if it ever actually came true the shock could be too much for some.

Midget Gems are those fabulous sweets that have been variously described as "like wine gums but harder", "brilliant", and "those things broke my tooth you know". They come in assorted colours and flavours, from liquorice to strawberry, and are shaped something like a cup cake turned upside down, and shrunk a hundred times.

Now this begs an interesting question: how the hell do you know it is upside down? Is there some kind of microscopic message that reads "this way up" that we only become aware of on a subliminal level?

Or is it some kind of primitive instinct that has been handed down through the genes of generations of dedicated Midget Gem eaters that makes us all blissfully aware of exactly which way round the conical confectionery should go? Or some kind of plot by some crooked political faction to subvert the nation's sweet eaters?

Imagine the effect if all of a sudden the people were told that their favourite sweets had been the wrong way up all along – never will a milk carton be opened the same way, people will be forever juggling their bags of Monster Munch in an effort to suss out which end to open.

But what has all this wibble got to do with a game? Probably very little but the dangerous similarity between the antagonists in this game and the afore-mentioned Midget Gems is quite disturbing. It made me wonder. Why? Well you see it all started like this...



The Sorcerer's apprentice decided, in a very Mickey Mouse kind of way, that sweeping the floors and learning to cast "Banish Earwax" and "Remove Navel Fluff" spells was no longer enough. Yes, the impatience of youth was beginning to become impossible to bear.

It all came to a head when the Sorcerer had to go on some urgent errand (apparently Spells 'R' Us were having a bulk shift of bat's wings and the guy just couldn't afford to miss out) so he told the apprentice not to touch anything – especially not the big, interesting-looking case which has nothing of interest in it. No sir, not that one.

Curiosity suitably aroused, the apprentice could hardly wait for the old codger – he was at Methusaleh's twenty first – to go so he could grab a shufti at the spell book and get the case open.

Minutes later, straining under the weight of the dust which the sorcerer paid someone to painstakingly apply to the spell book every day for that "authentic" feel, our apprentice carried the book to the lectern. Upon opening this copious tome the aura of magic around it was all-consuming, drawing in, seducing the apprentice. Soon he found the spell he needed – "How to open a big, interesting-looking case which has nothing of interest in it at all. No sir, not that one". Uncanny.

He recited the spell: "He's 'ere, 'e's there, 'e's every flamin' where 'e's Brian McClair, 'e's Brian McClair", and soon there was a glowing ball hovering just in front of his nose. He gathered it in his shivering hands and flung the orb at the case. It disappeared into the keyhole.

The case began jumping around the table in that drawing-pin-up-your-behind manner that schoolteachers the world over are familiar with. Smoke billowed from under the lid. Then it all stopped. The place went quiet. No-one made a sound. Silence, really.



The green fuzzballs should never be a problem

Convinced he had failed in his first meanderings into grown-up magic he went over to the case and stared at it, only to be flung back in surprise as the case's lid flew open and out came millions upon millions (well, quite a few) of Midget Gems. Sorry, Fuzzballs.

"Drat" he thought. Or something. He had to think fast, he had to cast a spell that would put them all back in the case – then no-one would be any the wiser. Obvious really. "Always look on the bright side of life



Early levels shouldn't present a problem



Be careful which pits you fall down

(whistley bit)". Disaster! The apprentice was a Fuzzball. "Damn," he said.

When the Sorcerer returned the apprentice/Fuzzball was quietly blubbing to himself in a corner. "Blub. I should have listened to me mother and joined the bank like she wanted. Blub, blub."

The air was turned blue as the Sorcerer returned and made some swift mental calculations as to what exactly had gone on – he was clever like that.

The punishment was simple. Clear the 50 chambers of the castle of every single little furry thingy, then maybe the Sorcerer will see fit to return the apprentice to his human form, and let him keep his job.

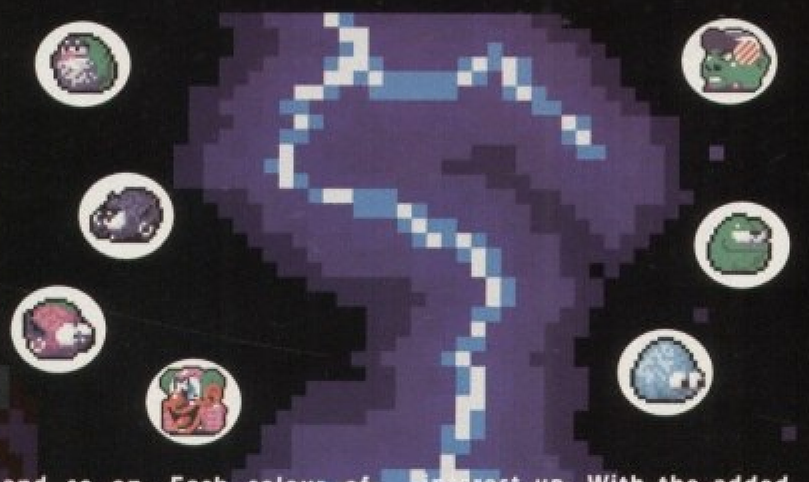
Cue fifty level platform game.

The objective is simple. As a Fuzzball, you must negotiate the intricate one screen levels and collect all the jewels – which are there for no reason that I can fathom out, but they do help the gameplay. Oh, and shoot all the rogue Fuzzballs.

Sounds easy, but there is a lot more to it. If you can do it then it perfectly acceptable to just take the jewels and forget the Fuzzballs, but in practice this is usually impossible.

There are four different kinds of Fuzzball – green, purple, black and red. Green are the easiest to get rid off, red the worst. The principle of destroying them is quite simple – using the little balls that you can spit you hit them enough times to turn them into mini versions of the next colour up.

This mini ball will bounce for four times giving you the chance to touch it and get rid of it completely. If you don't manage to touch it, then it transfers to the next and more dangerous colour, green to purple, purple to black and so on. Each colour of Fuzzball has its own behaviour pattern. Green will just move back and forth in a confined space, purple will do the same until you jump onto the same platform when they will race towards you, black will race back and forth over several platforms, turning when you jump onto their route and red will do the same but an awful lot faster.



The Fuzzball you control must jump around, across, up and down the numerous platforms of the level. Often the route around the screen must be planned very carefully because it is impossible to get off certain platforms. Some of them you won't need to go near, but once per level you will find one with a jewel on that must be left until last, and it won't always be particularly obvious.

The later levels need a lot of thought before even moving as to exactly how they are going to be tackled. It will often be a little less than clear as to exactly what you are going to have do. But that is all part of the challenge.

Graphically it can't be faulted – it possesses that coin-op feel that Parasol Stars has, but goes one better. It gradually progresses through four distinct graphical styles, that provide a variety in the backgrounds to keep the interest up. With the added bonus of a high class animated intro dramatising the above, it will beguile the player from the start.

The sound is a initially a bit iffy as the intro' tune sounds as though it would be more at home on the ST, but in game it improves to the point where you can almost fail to notice that there are only about three different sound effects. A game like this needs a lot of unnecessary sounds to liven it up and make it more enjoyable, and to give it a chance of standing up against other games in the genre.

The playability is superb – the levels are all challenging and there are no easy levels to give you a rest. The main Fuzzball is extremely manoeuvrable and provides lots of fun. This, though, also presents a problem – for less experienced gamers the high difficulty level right from the start will prove to be turn off, but for hardened joystick bashers it will be a godsend.

The biggest thing in its favour is its price – £20 for this kind of game is very keen marketing, but it does mean that it is a very strong game at a very good price.

Jools

VISION
GGGG
Arcade quality and colourful.

AUDIO
GGG
Too few effects masked by a good tune.

PLAYABILITY
GGGG
Difficulty means it lasts longer but may prove a turn-off for some.

ADDICTION
GGGG
You'll keep bouncin' till the end.

86%



With small platforms the more angry Fuzzballs should be avoided



The red glitter ball will disperse heat-seeking crows if you take too long



They may have big ears but they are actually harmless



What do you call an Eskimo's home without a toilet? An Ig!



The cube root squared

DEVIOUS DESIGNS

IMAGE WORKS • £25.99 • ½ meg • Joystick • Out now

There are what you might call some eccentrics writing software these days. It probably comes from some primitive instinct to shake off the worrying stereotype that proclaims that they are all sad men who sit in their bedrooms, at home with Mother, programming for all hours, only taking time off to readjust the Elastoplast that holds their NHS issue glasses together. Then again, maybe they are all just plain mad.

The chapette behind this is clearly no exception, as the scenario for this "interesting" puzzle game shows. A blighter named Dr Devious – ex-politician, ex-taxman, ex-DPP – has come up with a plot to hold the world to ransom as a revenge for his untimely demise from the forefront of public life.

Using his immense scientific skills, honed and focused in a garden shed, Dr Devious built a weapon. A weapon so powerful and so, well, devious really that it scared the pants off him. While bending down to pull them back up he realised that he would soon be a very rich man.

The weapon was a feat of molecular manipulation, chemical control and physical fondling. Or something. It could turn any object into a cubist representation of itself (he fancied himself as a bit of an art buff) and then juggle it around. It renders the said object/monument/public toilet completely useless. Dr Devious has the power to put them all back, but it will cost the world's governments big money. This is where JJ Maverick comes in, controlled by your good selves. Only he, the world's best special agent, can save the day. Only he has the talent, the nerve and the dramatic aftershave to do it.



Dr Devious turns up to give JJ some aggro in the Hollywood Hills



To break the tension every tenth level is a frustration-beating shoot-em-up where you have to blast Dr Devious. Or do you?

If you want to know what he looks like, pick any guy from a Gillette advert, especially one of the yuppie types, and you've got it.

This is a weird game. The first thing you are presented with as you start is basically a collection of nondescript blocks that need to be moved into a transparent frame. When they are all in the right places, the screen updates to reveal what the object is – essentially an excuse to parade some truly fantastic artwork, and for you to pat yourself on the back.

The controls are unusual to say the least. After the tutorial style of the first seven or eight levels, JJ Maverick becomes fully mobile. This involves the rather disorientating concept of every vertical or horizontal flat surface having its own gravity, so JJ can jump out from a wall, then be attracted by the gravity of a surface at another angle and land on that. Very strange. To move the pieces, JJ can pull, lift and carry, throw, or drop them into place. As the levels get harder it gets more difficult to work out exactly where you are going to move to and how the hell you are going to get that piece over there. It is all too easy to make one false move and end up in big trouble.

As if this wasn't enough, you get the added problems of irritants such as big things that shoot at you, bonuses to try to and to, and the whole thing is against the clock. What a complete nightmare.

It soon becomes one of the most frantic puzzle games this side of Lemmings, but because of the esoteric nature of the thing, and the iffy controls, it is definitely an acquired taste. But I've always been into acquiring new and different experiences – just ask my (that's quite enough of that – Mary Whitehouse Dept)

Enjoyable, more challenging than Anneka Rice, and excellent graphics – a worthy reward for struggling through the levels. Yes, it is eccentric, esoteric and some other word beginning with e and ending in ric.

The fifty levels there are will take a lot of playing, the hair-pulling factor is enormous and you won't stop battling with it for hours – if the joystick doesn't go through the monitor first. Fab.

Jools

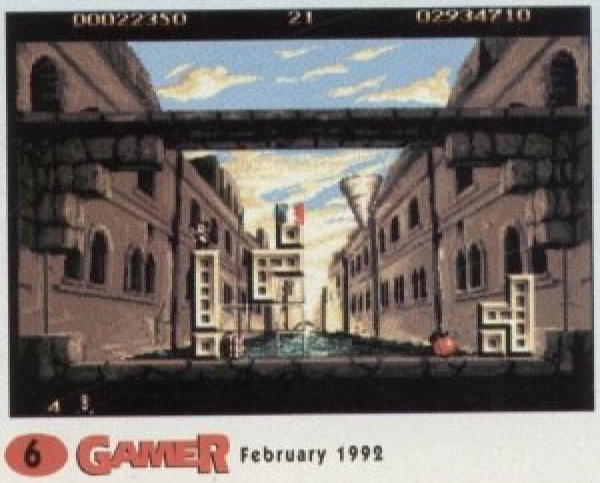
VISION GGGG
Loads of cute little bonuses and brilliant artwork.

AUDIO GGG
Bustling sound effects, but the same tune for every level.

PLAYABILITY GGGG
Frenzied frolics, but it gets a little too tricky for some tastes.

ADDICTION GGGG
So frustrating you just have to beat the thing to a pulp.

80%



Venice sees some manic action as JJ ducks the whirlwinds

The Great, Gorgeous GAMER Giveaway II

The Gorgeous Gamer Giveaway moves up a gear this month with some barnstorming Hollywood prizes. At great personal risk, the Gamer team have been glued to their telephones grovelling to various companies for some truly gibber-worthy prizes, often staying up until the early hours to make sure that the prizes are of the utmost quality.

As we said, this month's Giveaway has a distinctly Hollywood feel to it. You name it, we've got it! The glitter, the tinsel, the limousines and the plastic surgery. Prizes? We've got videos of Kevin Costner's Prince Of Thieves (courtesy of Warner Bros), RoboCop 2 (MCEG Virgin Vision) and The Simpsons (Fox Home Video), plus Robin Hood, RoboCop 3 and Simpsons games! Some much sought after videos and some much raved about games could be winging their way to you, just for the price of a stamp. Bargain city or what?

You don't have to enter all the sections, so if you only want to win Robin Hood then leave the others blank. We won't think any less of you for it. Of course, you've nothing to lose by going for all of them, but you won't be able to win them all. That would be greedy. Oh yes.

An arrow escape

You too could be squeezing into your bright green tights and a-twanging your bow string with a copy of that blockbuster movie, Robin Hood: Prince Of Thieves – and when you've watched the film you can relive the excitement in Millenium's Robin Hood arcade adventure.

The movie is a highly successful blend of swashbuckling skullduggery and Indiana Jones-style adventuring, and is worth watching just for Alan Rickman's psychotic Sheriff of Nottingham. And the good news is that that Bryan Adam's record doesn't crop up until the end credits, so you don't have to listen to it again.

The game fared equally well, earning a mighty 85 per cent. Picking some juicy quotes at random from the review tells us that "there's no lack of things to do", it's got "plenty of scope and tons of lastability" and that the Sheriff of Nottingham is actually Jeremy Beadle.



Prizes worth winning? You're not wrong, matey. We've got five Gamer bundles to give away, containing the Prince of Thieves video and the Robin Hood game, and all you have to do is answer the Robin Hood question on yonder coupon.

Send it to us at the address over the page, and the first five out of our magic wallaby pouch win the goodies.

Robin Hood compo

Just tick the right answers to the following question and send in the coupon:
Who played Robin in the crap British film last year that nobody saw?

- **Patrick Bergin**
- **Patrick Moore**
- **Roger Moore**

RoboCop compo

If you want the cracking video and even crackinger (?) game then just answer this question and send us yer address:
In RoboCop 2, which sad ex-Coronation Street star puts in an appearance?

- **Hilda Ogden**
- **Brian Tilsley**
- **Ena Sharples**

Simpsons compo

Dying to get yer mitts on the Simpsons goodies? Then answer this Bartesque question...
Where does Homer Simpson work?

- **The BBC**
- **A power plant**
- **Drive Thru Burgers**

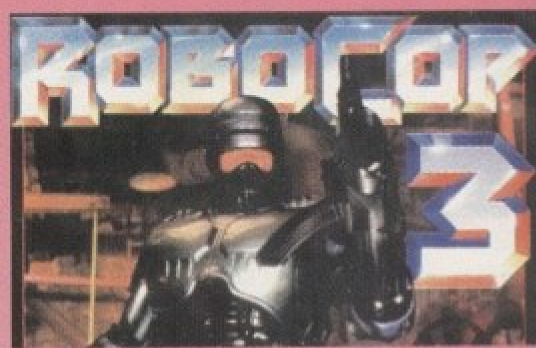
Please turn the page and fill in the coupon on the other side

CONTINUED

The Great, Gorgeous GAMER Giveaway II

Clunk click

RoboCop. He's a fairly popular sort of chap, isn't he? All that stomping about and shooting the bad guys. What a hero. As if you didn't know, RoboCop 3 is due to hit the cinemas in the near future. RoboCop 2 is currently selling like hot cakes on video and Ocean's ground-breaking interactive 3D RoboCop game is gaining accolades left, right and centre.



Unfortunately, you'll have to wait until next month for the low-down on the game, but we have it on good authority that it's a stonker. RoboCop2 the movie, on the other hand, we do know about and it's great. No messing, plenty of guns, shooting and exploding, and special effects that'll make your eyes pop out.

Naturally, we've got five copies of RoboCop 2 on video and ten copies of the RoboCop 3 game hot off the presses. To be in with a chance of winning these earth-shattering prizes, just answer the RoboCop question on the entry form and send it in to us. The first five get copies of the vid and the game, then five runners up get the game.

Unfortunately, RoboCop 2 is just too squishy for anyone under the age of 18, so no kiddies can enter this part of the giveaway. It's time to start creeping to your older brother...

Aye Carumba



And last, but by no means least, we reach Bart. No introductions needed I presume, so we'll get straight on with the competition.

We've wangled three complete sets of Simpsons videos and ten copies of Ocean's Simpsons game. The video sets contain four videos each, with two episodes of the hit TV series per video.

So that's..er...um...eight episodes. If you want Bart and Co to keep and cherish forever, then you need do no more than answer the question overleaf and send it to us post-haste.

The first three out of "the bag", as we say, will win a complete video set and a copy of the game. Then the next seven will win the game. Generosity just oozes out of every pore.

Rules 'n' stuff

1. Employees of Europress Publications, Ocean Software, Millenium Software, Warner Brothers, Virgin Video and 20th Century Fox may not enter. 'Cos we're dead mean like that.

2. Our decision is final. Anyone who moans will have their phone number passed on to Biffa. Not a pleasant thought.

3. All entries must be received by 6 February, 1991. Any received after that date will be pinned to the wall and laughed at by all and sundry.

4. Anyone entering to win RoboCop 2 must sign the legal thingy to state that they are over 18. Any entries for RoboCop 2 without this signature will be passed to the West Midlands Serious Crime Squad.

Answered all the questions you want to answer? Just fill in this boring bit, do a bit of nifty scissor work and send it to us at:

Gamer Giveaway, Gamer,
Europa House, Adlington Park,
MACCLESFIELD SK10 4NP

Name: ....

Address: ....

....

Phone Number: ....

If you entered for RoboCop2 please sign the following legal gubbins.
I am over 18 years of age, honest guv, signed:

....



Dodge the snake and miss the asteroids

This could probably be called a real "pacemaker"

Cardiaxx

Electronic Zoo ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

There are definite downsides to this job. One of them is trying to pad out a six hundred word review of a shoot-'em-up when you know full well that everyone in the entire universe knows exactly what the scenario is. Allow me to reproduce the Industry Standard Shoot-'Em-Up Scenario Creator, free with Amiga Gamer...

The year is (insert four numbers here, the first one must be higher than 2). The human race is being threatened by the evil (insert name of alien race here, word must have ratio of one vowel to every four consonants to be realistic). You must pilot the new breed of starship (insert name of starship here, must start with an X or a Z or sound like a fifties Ford car), designed to be (insert hyperbole here).

But things go tragically wrong, as you and your fleet fly into the night (hum dramatic music here and make some gratuitous comment about wives weeping as they depart), they are ambushed by the (insert alien name here), and you are the only one left (waffle for a paragraph about how only you can do it and that no-one else is strong enough to face the challenge). Conclude with something along the lines of "Have you the skill, wit and reflexes to do the job?"

That's about it really. Any names you think of or any little nuances can be incorporated into that little template. Brilliant, isn't it? But, fair play to 'em, the Zoo have included a wee novella in the manual to pad it out a bit. Actually, it is the manual. It's reasonable, but hardly original. Electronic Zoo claim this is the fastest two-way scrolling shoot-'em-up game to date. They're not wrong, it does scroll brilliantly fast – the only problem is that most of the time you'd rather just sit there and fire and not have to worry about flying into things.

The majority of the aliens, you see, have very static patterns moving in a formation about a fixed point, so the last thing you want to be doing is racing back and forth like the proverbial yo-yo.

But if you like needless speed then this could be the thing for you. The gameplay is simplistic – most levels are played against the clock, giving you a set length of time to defeat a series of aliens, or you don't make it on to the next level – and as you defeat each one, the ship is powered up to the next level of fire-power. If you die, you lose one level of power-up. Graphically it is very simple, but it had to be so it could cope with the rate of scrolling without going up in smoke. There are very few sprites onscreen at once, there's only basic landscaping at top and bottom, and nothing in between to give you any idea of speed when you move off the edge of the landscape.

This is often crucial as you may have to move off, turn around and come back on to attack, but if you don't know how fast you are going then it may all go tragically wrong.

The sound relies all too heavily on one Uzi sample for the gun, but the tune is ace, and sounds like a chill-out room at a rave. What more could you want after a heavy blasting session?

Playability isn't as bad as you might think. It's good fun and quite a challenge, but it just doesn't add up to all it should. This is probably because they couldn't animate the sprites as fast as the ship. It will provide a new twist for shoot-'em-up fans, but only the real addicts. Ah well, not a bad try lads.

Jools



Three groups of aliens destroyed once you get a really big gun

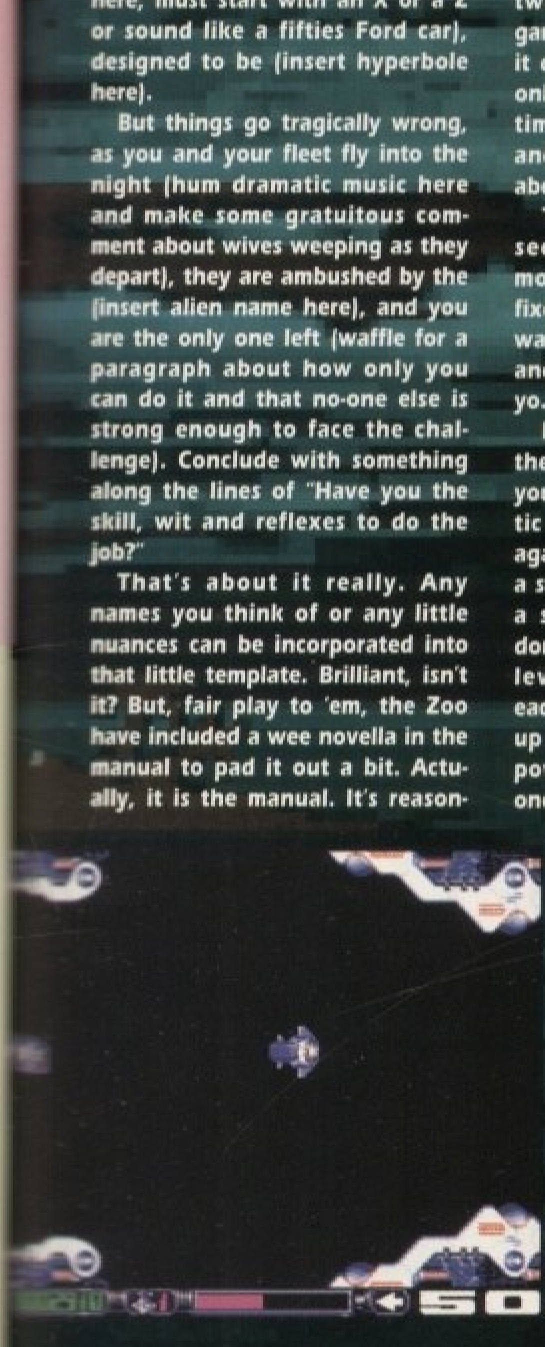
VISION
Scrolls lightning fast but there isn't much to scroll.

AUDIO
Uzi samples and rave tune between games.

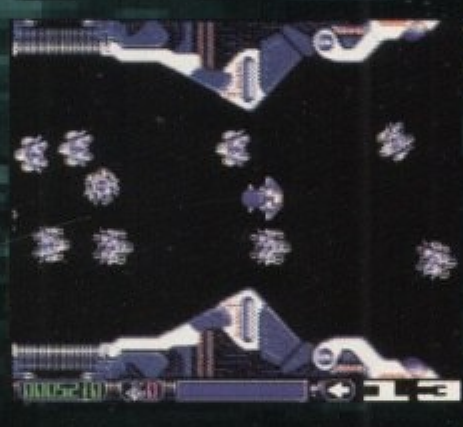
PLAYABILITY
New twist but it doesn't work too well.

ADDICTION
Not brilliant, but a minor diversion.

68%



Those detailed backgrounds make it so atmospheric



Hordes of aliens, but they aren't a problem

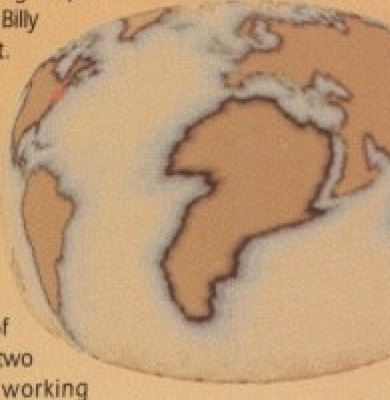
Mine's a double, barman. Yes, it's...

DOUBLE DRAGON 3

STORM ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

Poor old Jimmy and Billy Dragon. Their lot is not a happy one. Not only do they keep having to nip around all over the world to rescue their "babe", but they've also got the most inappropriate names in a beat-'em-up ever – Jimmy and Billy. Very butch. Might as well just call them Smeg and Bep. Or John and Norma. An unhappy lot indeed.

Well, they ain't out of the fire yet. Despite having finally dumped their kidnap-prone missus, they're still "doing the business" and kicking rear ends all over the globe. The reason? Stones. Yes, it seems that they bumped into some wizened old gypsy dude who told them to risk life and limb and go and fetch some spooky bricks back from various foreign climes. And being stupid gets, Jimmy and Billy go along with it. Pillocks.



Now this could be my imagination, but aren't there a series of really crap adverts for a certain brand of bitter in which two jolly northern working men's club types travel the world and talk about – gasp – Stones?

Could this be the world's first bitter-'em-up? Is there a bonus level where you have to earn extra lives by making unimaginative semi-racist jokes at the locals' expense and laughing in loud raucous tones? Er, actually, no. Thank God.

It is, pop pickers, merely a beat-'em-up. Plain and simple. Various joystick manoeuvres twist our heroes into a selection of fighting moves, all of which bring a tear to the eye and a twang to the underwear. Weapons can be purchased from shops, as can extra lives, energy and special moves.

The shop sections try to inject a little bit of novelty into the proceedings, but fail in no uncertain terms. The instructions mention nothing of the shops, so there's no way of knowing what weapons you'll get, or what moves, or anything. It's all hit and miss until you can suss out what you'll get for yer money.

The instructions really are dismal. They tell you how to perform the various moves, but there's no mention of how to get extra coins, or what special actions are available. It seems a bit pointless to include a feature like the shop in the game and then not explain it. I don't know. Grumble, grumble. That aside, DD3 is a competent beat-'em-up. It's nothing we haven't seen a hundred times before, but it's slick and smooth so we'll let that pass. Things have been planned well, so there's none of your Final Fight "finish it in half an hour" malarkey here.

And so we come to those last few "summing up" paragraphs. The graphics could have been better. The backgrounds are detailed and there are plenty of boxes and things to leap about on. The sprites look suitably, er, spritely and they skip about in a jolly, if somewhat mincing, fashion. But they lack that extra "shazam" that makes you go "Ooh look at the shazam on those sprites".

Sound is restricted to a rather nice trickling stream/tune at the beginning and some solid FX. As with the graphics, the sound is good but not good enough to leave an impression.

To be fair, Double Dragon 3 is a lot better than most of the lacklustre beat-'em-ups that the software houses churn out. Unfortunately, it's not different enough to make you go "Oh yeh, Double Dragon 3. That's the one with the famous cottage cheese sub-section."

Instead, you'll probably go "Oh yeh, Double Dragon 3. That's another Double Dragon game isn't it?". Ah well, another day, another beat-'em-up.

Daniel



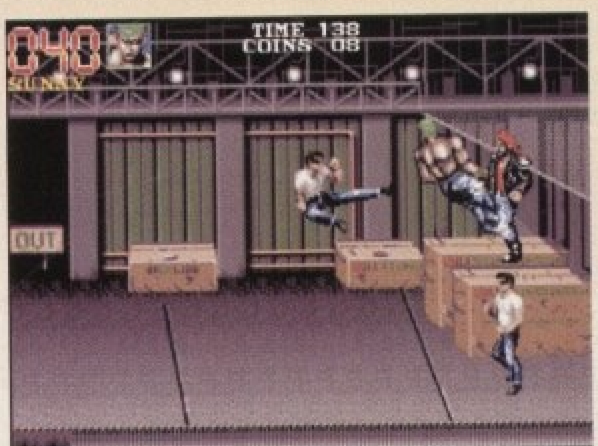
Eating a spicy curry the night before gives you long distance fighting power



Extra lives come in the guise of different fighters in one-player mode. Meet "Sunny"



Those rancid armpits send the thugs flying



Makes your eyes water just looking at it, doesn't it?



Attack of the Mutant Pyjama People

VISION – GGGG – Hardly original, but polished and varied.

AUDIO – GGG – A nice, watery tune, and some functional FX.

PLAYABILITY – GGG – Decidedly average. The "shop" adds nothing new.

ADDICTION – GGG – You'll stick with it, for a while at least.

72%

The ancient art of Sma Kin Marf

4D SPORTS BOXING

MINDSCAPE • £25.99 • 1 meg • Joystick • Out now

It's a scary old sport isn't it, boxing? Two men stand in a ring and smack each other about the head repeatedly with cushions strapped to their fists. They keep doing this until one of them falls over and then the one who didn't fall over holds his arms up in the air and tries to pretend that he isn't about to drop dead. Very noble.

So noble in fact that Mindscape, producers of quality spook software, have decided to give boxing the old 4D treatment. Thus, you closet fist-mongers can beat seven bells out of some innocent vectors without alarming elderly relatives. So let's batten down the hatches and take a look...

OK, so the screenshots look a bit startling don't they? All triangles and funny shapes and no parallax scrolling or anything. It's enough to make your average beat-'em-up fan hide under the sofa. That's because vectors and polygons tend to imply (hushed whisper) "strategy" and "simulators". Eek. Grown up games! There's no fun in that, matey, I'm off. But before you run away to play something refreshingly brain dead, hold on a wee while and find out just why a bit of strategy and simulation can spice up your run-of-the-mill boxing game.



Grrrr. Grrrr. Sweat. Pant. Hrrrrnnngh. Etc etc

To call 4D Sports Boxing a boxing "game" is perhaps a smidge insulting. It's more of a boxing simulator. You control the creation of up to ten boxers, build up their skills, and then step into their shoes for the fights.

The crux of the game is the fighting, but emphasising the wrong elements of training will mean that your boxer isn't prepared for his opponent and will promptly get his head stomped good and proper. Not the healthiest of positions to be in.

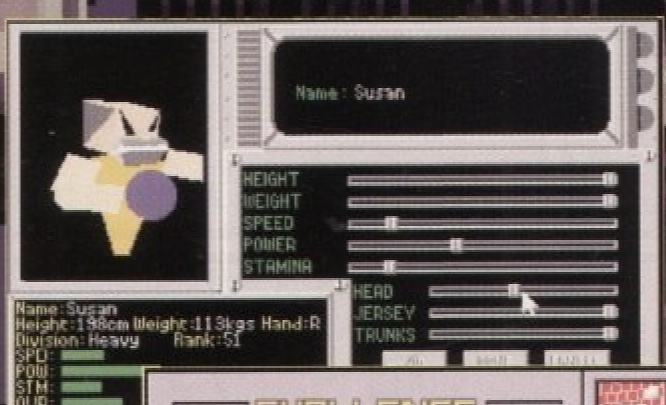
So, you've created a boxer using the remarkably simple "Create a Boxer" section. Fairly obvious. You now can enter your boxer – let's call him Susan just for humorous effect – in an exhibition fight. An exhibition fight lets Susan slug it out with a rival of your choice.

This has many advantages. For one it allows you to get used to the controls. Secondly it lets you suss out the kind of tactics you can expect from your various opponents, and thirdly you can afford to get beaten into the ground without affecting your league rating.

Once you've mastered the moves available, which is pretty easy, then you'll be ready to go for the "main event", where you can get beaten to death in a professional capacity, rather than as a rank amateur.

Going back to the moves, apparently you can perform a variety of "showboat" actions. These include jigging up and down, goading your opponent and generally acting like a right old prima donna. Unfortunately, these only work when you press the second Fire button on your joystick.

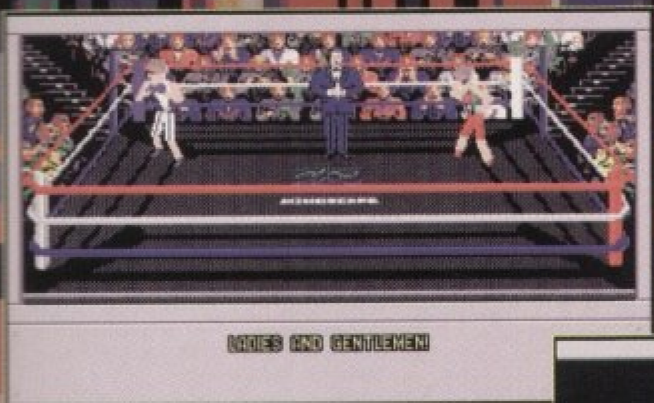
That is, of course, assuming you have two separate Fire buttons. As most people will have



Susan the boxer in Dire Straits video shocker



Time to pick an opponent for Susan...



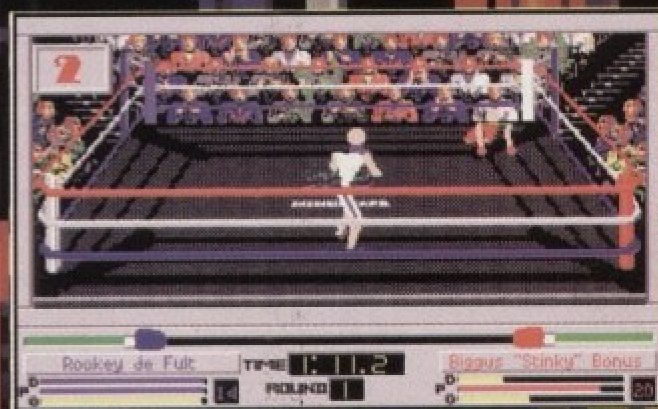
There's no turning back now, you're committed to a bloody good kicking



And it's a cracker of a right hook from the amazing fish – like boxer!



The cameras zoom in for the blood – curdling finale



An action replay reveals an unsporting "knee in the danglers" move

their Fire buttons linked to one microswitch, this renders that rather clever feature a bit redundant. Flippin' annoying as well, as I was looking forward to doing all those show-off moves. Gosh, darn it Mabel!

Anyway, you select your opponent from the league by judging their skills against yours, and then concentrate your training on those aspects you need to firm up on (oh yes, missus). This done, you can slip into some seductive silk shorts, step into the ring and have your brains turned to mush for fun and profit. Now that's entertainment.

In the ring, things start to look even more simulator-ish. The people don't look like real people, more like Dairylea triangles with attitude. They move like real people though, and that's 'cos all their movements have been copied from real live boxers. Yes indeed.

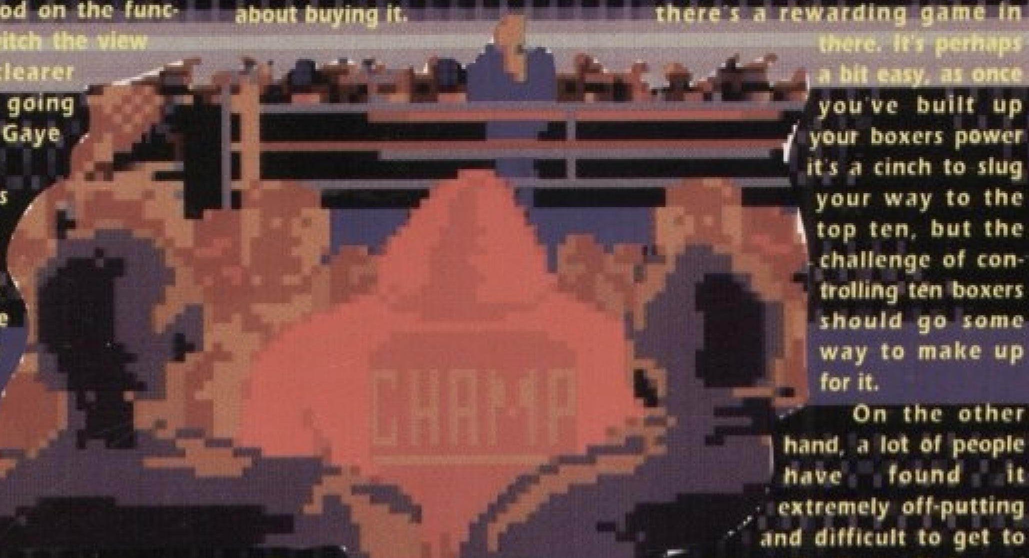
The most simulator-ish aspect of all, though, is the multitude of definable camera viewpoints. Yep, camera views. Now you may think that the last thing you'd want to do while exchanging blows with a muscle bound hulk called Bosher is to fiddle with external camera viewpoints.

Surprisingly, the idea works quite well. If Susan is being obscured by your beefy opponent, a quick prod on the function keys will switch the view to give you a clearer idea of "what's going on", as Marvin Gaye would have said.

OK, so things do look a bit confused when the boxers get close, and the animation can look biologically unsound at times, but the 3D works well and the freedom of movement gives you plenty of room to develop an individual fighting style. I found that shuffling around and trying not to get leathered was quite a wise approach to begin with. And so that you don't spend the whole time waving your fists at thin air, there's a proximity meter that shows how far apart the boxers are. When they're in punching distance, it turns yellow and you can let fly with a flurry of blows.

Well, criticism time I think. The graphics are a bit iffy at times, as you can tell, and the boxers heads have a disturbing habit of switching from little circles to alarming cubes for no obvious reason. This doesn't affect the gameplay really, but it can be disorientating.

Another gripe, being the grouchy git I am, is that at times the game can be very slow. Not during the fights thank God, but selecting options often leads to drawn out disk accessing, which makes the management sections a bit of a chore. And of course, the rather odd 3D approach may make some people think twice about buying it.



On a lighter note, the sound effects are really meaty with some bone-crunching "thud" noises, grunts and groans. The music is bearable, but not the sort of tune you're likely to hum in the bath. The presentation is, on the whole, fairly good. Despite the spooky graphics, the little details haven't been ignored. For instance, during training you'll actually see Susan (or whatever you call your boxer) doing "her" thang. Skipping, punchballs and the speed bag are all there in polygon 3D.

The playability is the sticky bit. I liked it, personally. If you can look beyond the unusual visuals, there's a rewarding game in there. It's perhaps a bit easy, as once you've built up your boxers power it's a cinch to slug your way to the top ten, but the challenge of controlling ten boxers should go some way to make up for it.

On the other hand, a lot of people have found it extremely off-putting and difficult to get to grips with. Hmm. Nah, sod 'em. I liked it and if you like sports games that require a bit more thought then you'll like it too.

Mindscape have taken a risk with a game like this, and it's almost paid off. Not a perfect game by any means, but if you persevere you'll be rewarded. Give it a go.

Daniel

VISION GGG
A brave 3D approach that occasionally doesn't work as well as it should.

AUDIO GGG
Above average tune and satisfying thumping noises.

PLAYABILITY GGGG
Make the effort and you'll get more than your money's worth.

ADDICTION GGGG
Maybe too easy, but enough options to make it stay the distance.

80%

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the source

With barely a pause for breath following the success of Armour-Geddon for Psygnosis, Ed Scio is working on a new flight sim for them. Gamer travelled to the industrial North East to get mauled by a large labrador

Psygnosis have never been ones for beating about the bush. The latest example of this is Avenger, a flight sim based on the F-14 and the F/A-18. While only a working title, the scenario is all too clear – full Desert Storm, get those Iraqis out of Kuwait, torch the Revolutionary Guard and don't get killed.

None of this "might be set in the Gulf. Possibly" business for Psygnosis. And after the top notch work that Ed did on Armour-geddon, he was the natural choice for a vector-based flight-sim.

The game can be played in two ways – as single missions or as a campaign, but all will be based in one of the planes flown from a carrier. A campaign will be made up of single missions, but their result will affect the outcome of allied activities on the ground.

For example, if you successfully fly a mission to knock out a bridge, then enemy troop movements will be restricted making movement of, say, a tank convoy on the other side of the river a lot easier.

The game will include a number of mission types that haven't been seen before on computer. No-one could forget those stunning images recorded through the laser bomb-guiding system that stuttered across our TV screens in the spring. Well, this feature has been introduced into Avenger.

You can fly in either plane as the laser aimer, using you immense skill as a pilot to place that laser beam right where it should be so that your partner in the other plane can drop the bomb without worrying, or an F-14 will be able to escort a computer-controlled F/A-18 on a bombing mission over enemy territory. You could probably do one over friendly territory as well, but the chaps with the big moustaches might not be overly impressed.

Before all this begins though, Ed has plans to include a line vector mission planning screen, where waypoints can be plotted for the autopilot to follow. Similar, I'm told, to the system used during the actual conflict.

Accuracy, in equipment at least, has been a big thing with Ed on this project. While accurately reproducing the boredom of long distance flying is not always good on the playability front, Ed wanted as much of the real weaponry and cockpit equipment in there as possible.

Both of the cockpit bitmaps represent reasonably accurately the real thing, but the real accuracy is the equipment found for use in the F/A-18. This includes a Velocity Search that picks up moving objects and something called a Track While Scan, which allows the radar to lock on to one moving target while looking for others. Not all of this is available to the pilot of the F-14, because he has his own navigator to do all this for him.

Graphically, while being vector based, the little touches will all be there. Fully movable flaps on both planes, animated airbrakes and arrester hooks and more built-in camera angles than you could shake a telephoto lens at. This will make just flying to and fro an almost cinematic experience, with various pre-programmed pans and swoops included to make you look more like Tom Cruise than Tom Cruise.

The real innovation, though Ed can't understand why no-one has done it before because he reckons it is dead easy, is the fully ➤



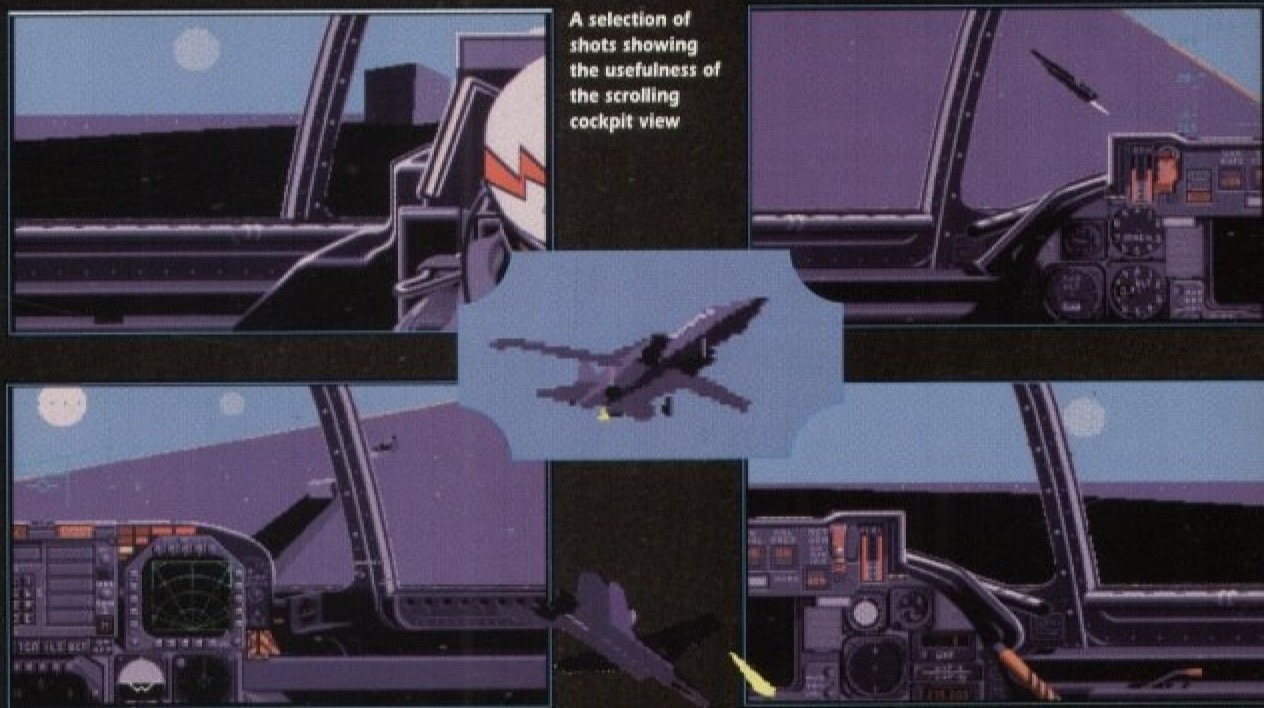








the Source



A selection of shots showing the usefulness of the scrolling cockpit view

scrolling cockpit view. Previously flight simmers have only been able to flick between side view and front views, but now the player can actually turn the view from the cockpit as though he were turning his head.

This makes flying and looking around far easier and a lot less disorientating than flicking between screens. At the moment this only works in the horizontal plane, but Ed is working on getting the pilot to look up as well. I hope he manages it.

Weather features like lightning, rain, and thunder will all be implemented giving the game's atmosphere a real boost. Imagine flying through a thunderstorm at night on the way to bomb a very important target over the border – it would be fantastic. Or flying by radar because of the poor visibility even at low level.

There will also be a completely accurate star map – no use for navigating unless you are really clever, but if you ever have a free moment you can try and figure out what the Big Dipper looks like from Baghdad. Night and day perform correctly – none of this broad daylight to pitch black in one fell palette change for Ed.

No, from broad daylight to pitch black takes about six palette changes, so you can take off just before dawn in true Desert Storm style to wake up Saddam with a big missile.

Each object will have its own sound, which will react to where the player's view is from. For example, if an outside view is taken of the F-14 flying past the camera, the sound will grow louder to climax in a big woosh as it zooms past and gently fades away into the distance.

The same effect will be found with missiles. Even the cockpit wind noise, I'm told, is accurate. Not that I could distinguish cockpit wind noise from an elephant's fart, but the thought counts, and it does sound different to the engine noise in the cockpit. The only place where accuracy does take a dive is the number of enemy planes in the game. If Ed had stayed true to real life there would have been approximately three Iraqi jets. So for the sake of gameplay, ie having some, a few more have been added. All of the planes that flew over the border in the real war won't have done, so that you will be able to fly against the MiG-29s with the Soviet-trained pilots, or the French Mirages with Iraqi-trained pilots.

Don't make the mistake of thinking that this is the next Birds of Prey – it isn't. The accuracy is there, but the gameplay has been enhanced to make it feel like a game – action and adventure, that kind of thing – but not to the extent where it all gets repetitive in that F-15 II kind of way.

When it appears in early March 1992 Avenger, or whatever it ends up being called, will become the definitive "fun" flight sim. Groovy.

Jools







Clockwise from top: flying at dusk; launching dumb ZUNI rockets at a tanker; and a Sidewinder racing off into the night

talking shop

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GAMER

ELSPA Chart

Blimey! Nine new entries, twelve climbers and nine fallers, but the big news is that the entire top five is made up of full price titles, all of which are Gamer Golds (have we got taste or what?). And there are only three budget titles in the whole top ten. Lotus II, at number one, has obviously found the stamina to maintain its climb up the chart, with Mega-lo-Mania not far behind.

But there are still a lot of big titles waiting in the wings to make a huge entry – First Samurai, Pit Fighter and Formula One Grand Prix for example, and of course, Populous II, the sane man's tip-for-the-top this Christmas. Don't discount Cliff Richard though, he could do it. Not only that, but Psygnosis have got some three or four titles waiting in the wings, and one of them will surely do the business, won't it?

The top quality of Jimmy White's Snooker ensures that it still hangs in there some three months after its release. It just goes to show that you do appreciate quality after all. And finally, some weeks after the World Cup, Domark's rugby sim is still holding on. What it needs for a boost is a data disk that allows you to drink a lot and leer at women in pubs. That would be good.

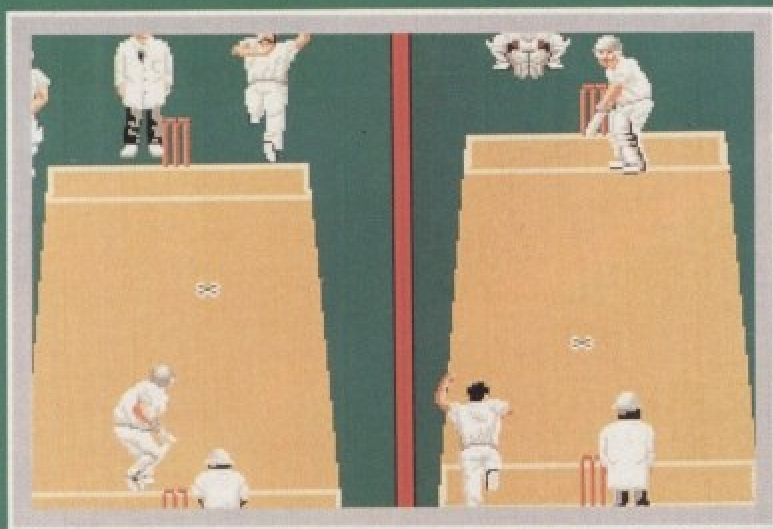
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13	▲▲	15	Rugby – The World Cup	Domark	£24.99
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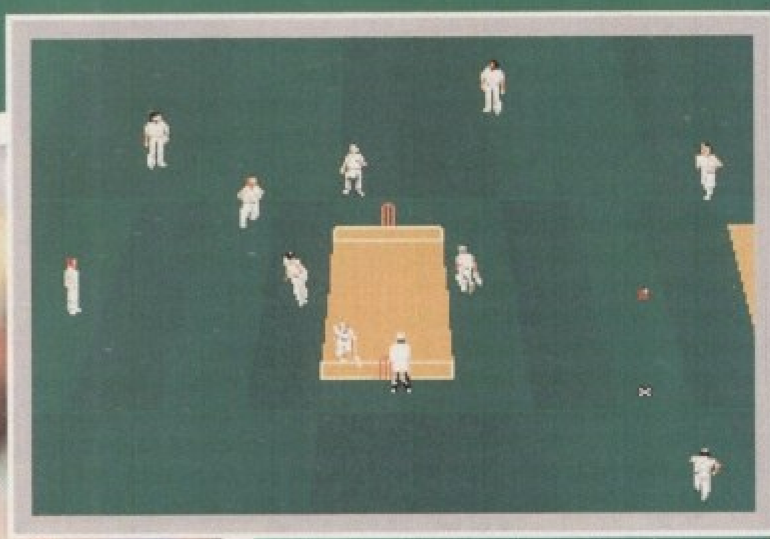
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Ian Botham's

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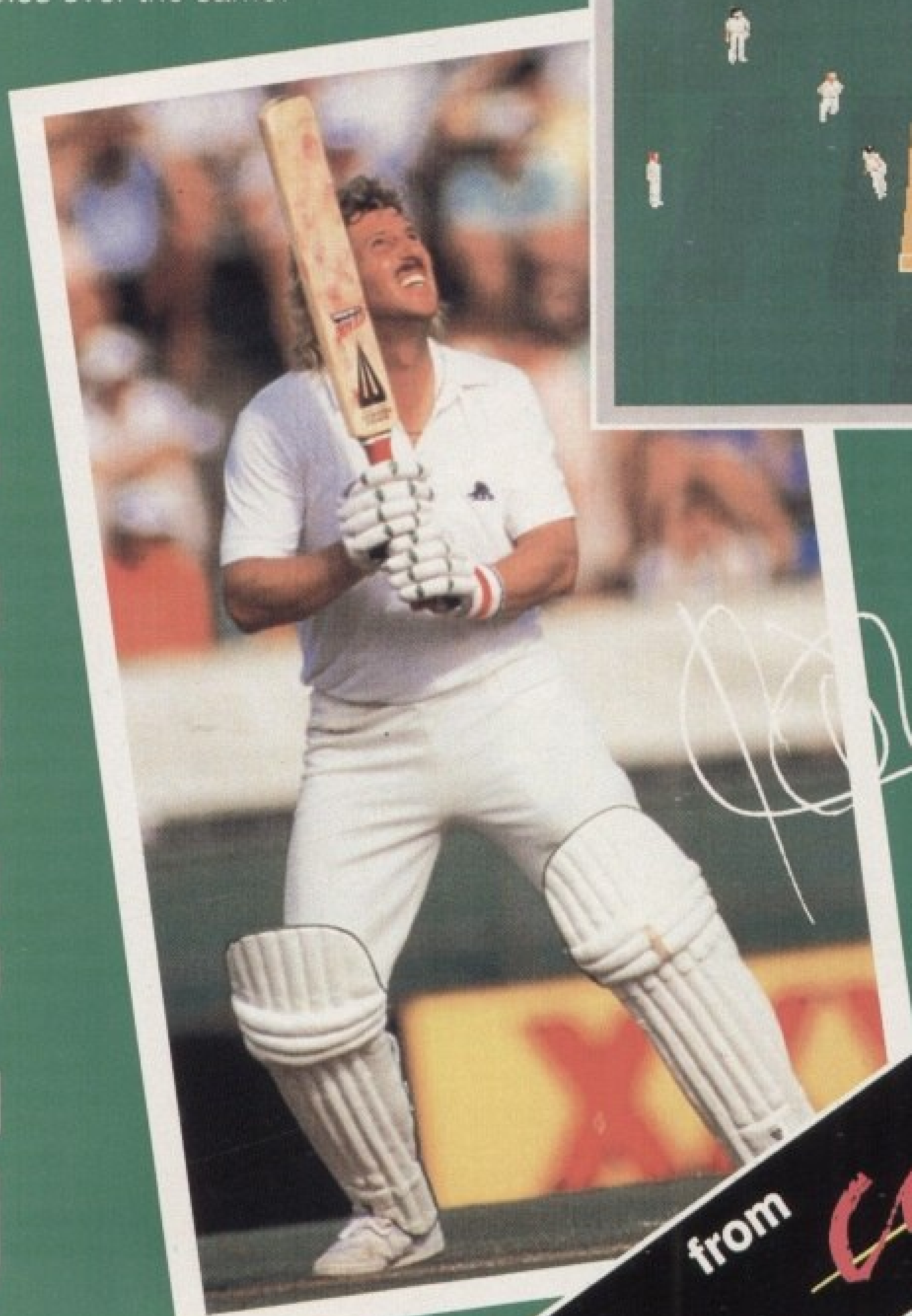
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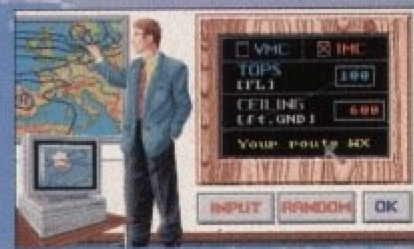
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The Met Office supplies the latest weather report. With a cloud base of 600 feet the ILS will be needed for the landing

However exciting it may be, flying is, for most of us, limited to seat 10B on a 20-year-old airliner carrying us to our summer holiday resort.

At a cost of £5,000, give or take a grand, learning to fly even the smallest fixed-wing aircraft is financially out of reach of many and a trip into a multi-million pound simulator used by airlines is limited to spotty little kids writing to Jim'll Fix It or computer programmers on the Krypton Factor.

This is, perhaps, why flight sims on home computers are so popular. The Amiga has already seen its fair share though, with the exception of ProFlight, they are little more than shoot-'em-ups based on fast military jets.

Serious fliers have really been limited to trips in a single-engined Cessna, courtesy of Flight Simulator 2. It used to be the best, but is rather sluggish compared to other software and desperately needs updating.

German software house Thalion have rolled out what can only be described as the best yet in Amiga simulation. Written by a Luftwaffe pilot, A320 Airbus puts you in the left-hand seat of a modern fly-by-wire jet of the same name.

Just like the guy that flew you to Corfu, it starts with a visit to flight briefing. A simple flight plan must be filled with details of the route, number of passengers (PAX), fuel weight and freight. The latest weather at the destination is printed.

During flight, the weather can deteriorate and the odd emergency means that you need to have a diversion airport planned. This happens mainly at the higher levels of the simulation.

Unlike other sims, the view is only from the Captain's side of the plane and so you only use the left side of the instrument panel and windscreen. The view can be moved about though, so you can look to the left or right of the plane.

There isn't an option to look diagonally across out of the First Officer's window which seems a little strange. With it being an airliner, there is no need for a rear view.

Control is split between the keyboard and mouse or joystick. The mouse appeared to give the best results but it's probably one of those things that's down to an individual's choice. The keyboard commands are easy to remember and well placed.

The medium-sized airliner has one engine on each wing. They have to be started separately and once the power has stopped at 17 per cent they are increased together to get the plane rolling forward.

It starts with the place sitting on the nearest taxiway to the runway threshold, and so it's simply a case of turning on to the strip and straightening up on to the centreline before banging the power up for take off.

Once the speed has reached about 150 knots you should be able to get airborne. Lift the gear and you're on your way. It's as simple as that – nearly.

Finding the destination demands the use of genuine Jeppesen navigation charts, which are supplied in the box. Radio frequencies for beacons along the route must be entered into the navigation system and should be overflown.

With no instructions from air traffic control, they are a necessity unless the plane is to be flown around in circuits at one aerodrome. Actually, this isn't too much of a bad idea until you get the hang of things.

They say what goes up must come down and so once overhead the airfield you have to prepare to get the plane safely onto the ground. The instrument landing system, known simply as ILS, is an important piece of equipment for this bit of the flight.

Used for guiding aircraft towards the runway they, like beacons, transmit on certain frequencies. These can be found with other approach details in the 240-page manual and are,



The operations room asks whether you're a first time flyer or checking in for duty. By saving information to disk, you can progress from trainee to captain and pick up your wings



Before hopping into the captain's seat, make a visit to flight briefing to complete a flight plan



The instrument landing system frequency has to be entered into the plane's navigation computer via the mouse



Views can be made to the left or right. These are especially useful when turning on to the final approach for landing



The autopilot knows exactly how to turn on to the approach and follows the correct path all the way to touchdown

VISION GGGG
Clear instruments, reasonable screen updates.

AUDIO GGGGG
Just what can you do with a jet?

PLAYABILITY GGGG
Play? Grrrr.

ADDICTION GGGG
Like the real thing, long trips can be tedious.

92%



again, the same as those used by commercial pilots.

Two bars should appear on a dial on the right-hand side of the instrument panel. A perfect approach has these crossing at their centre and if they are not central, they'll indicate which direction to head in to get on course.

All the normal landing procedures have to be carried out. Control the speed using throttle, brakes and flaps and don't forget to lower the landing gear. If the undercarriage is lowered, three red lights on the panel will turn to green – if they don't you better start praying.

As the runway nears, a little light in the cockpit flashes to show that you've overflown the outer marker – a beacon four miles from touch-down. Closer still you'll pass the inner marker.

Providing the landing goes as planned the engines are put into reverse thrust to help cut the plane's speed and the jet should be then be taxied off the runway. It sounds easy, but it's not.

Help is available through the autopilot. The A320 will be flown automatically at the correct height, power and direction and can even land itself. This is especially useful if the runway is covered in low cloud or fog.

None of the program's features appears to have been bunged in as an afterthought. Even the clouds have been thought about, flickering between different shades of grey before the aircraft pops out on the other side.

All major airfields from Southern Europe to Bodo in Norway are available and rivers and towns appear in the correct places. So, for example, if you lift from Frankfurt Main, within a minute or two you'll be flying over the Rhine. In addition to runway lights, every airfield has almost complete approach lighting. The exception is VASI lights which are used by pilots making visual landings to show whether the approach is above or below the correct path.

The only other niggle is that the runway markings are not included, but this is a minor complaint and does little to spoil the simulation. Maybe they can be added in future versions.

The question "what else can you do other than fly around?" was asked more than once in the office. The answer is: not a lot. While it has plenty of interesting features, A320 is not intended as a action-packed game. This is one for those wanting to see what flying is really like.

As an indication of its realism, A320 Airbus has already been endorsed by Airbus Industries as the most realistic simulator for home computers, and Thalion are being supported by Lufthansa, who will supply pilots wings to people who progress from trainee to Captain on the simulator.

Upgrades to the program are already on the cards and will be available for a small price as each is released. Jeppesen have agreed to sell updates to charts at trade price.

At the end of the day, smooth graphics, realistic flying and good effects make this the Amiga simulator which others are going to be judged against.

John Butters



As the sun goes down the light is reduced to give dusk flying. The runway lights stand out much more

Lettuce page

Got a question? A problem? A grumble? A gnu? We're here to set the record straight...

GONGED

Dear Gamer,

It's nice to see a separate games section in your magazine, as being a "gentleman of leisure" (ie. retired!) I have recently discovered the wonderful world of computer games as a hobby. So I was wondering if you could help explain your ratings system to me, as I'm not at all familiar with how magazines score computer games.

As far as I can tell, the overall percentage has no relation to the individual marks out of five. Just what do each of the scores mean?

Ernest Wood, Southport

This letter was sent to our colleagues at ST Gamer. We feel the point it makes applies equally to Amiga Gamer, so to clarify matters we've put together this rather handy guide to the eerie world of the Gamer Gong!

VISION

The VISION score tells you, generally, how the game looks. This includes graphics, presentation and all-round visual appeal.

AUDIO

How good is the music? Are the sound effects worth pumping up the volume for? The AUDIO score will tell you.

PLAYABILITY

Is the game easy to get into? How much fun is it to play? PLAYABILITY let's you know.

ADDICTION

So it might look great, and sound fantastic, but will you still be playing it in a month's time? The ADDICTION score sorts that out.

The overall percentage is not connected to the Gamer Gongs. If that were the case, then a game could get a high mark simply because it had excellent sound and graphics. So to keep things fair, the overall percentage is an all-round summary of the game, with vision, audio, playability and addiction all taken into consideration.

For each review, the Gamer team put their heads together (not a pretty sight with Biffa) and decide just what percentage the game deserves, thus each game gets a completely objective and balanced review.

Hope that sorts out the confusion!

The Rough Guide To Gongs

VISION – Abysmal. Turgid. Despicable.

ADDICTION – Very poor indeed. Must try harder.

AUDIO – Not very good at all. Below average.

PLAYABILITY – A respectable amount. Middle ground.

VISION – Bordering on excellent. Better than most.

ADDICTION – The business! Something very special indeed.

Are we cheating?

A young gentleman who identifies himself only as "Chris" from Reading accuses us of cheating by reviewing unfinished software. His proof, it would seem, is the fact that we awarded Terminator 2 only 40 per cent, while another magazine gave it a rather generous 63 per cent.

He also cites the Thunderhawk "incident" from ST Gamer where we marked the game up after the review because changes were made to the program when the game hit the shelves. He demands a response, and never ones to back down, we're prepared to explain.



Firstly, we would never review "unfinished" software. What we sometimes have to do, as do many other magazines, is review "pre-production" versions of a game. This is when the software houses send us the game, without all the fancy packaging and frills, but with the game intact so the review can be published at the same time as the game is released.

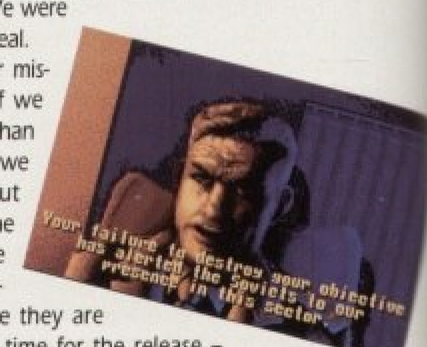
If we had to wait for every game to be tarted up and put in a big box, you'd probably have bought the game by the time you read the review. This is not cheating, as it is done with the permission of the software houses who send us the disks for "review purposes".

Nor is it confined to Gamer. Pick any exclusive review from any computer magazine and it's almost guaranteed to have been reviewed from the pre-production version. It wouldn't be exclusive if the game was already released, would it?

Now to answer Chris' comments on Terminator 2 and Thunderhawk. Firstly, the version of Terminator 2 we reviewed was in fact the fully finished, boxed product complete with T-shirt and everything. We did not mark it down because we didn't see the finished game, but rather because we thought it was crap. That's what a review is – a matter of opinion. Therefore, another magazine may have liked it – but we didn't. You have to decide whose opinion you value most.

The Thunderhawk incident was one of those errors that happens in the fast-moving world of publishing. What had happened was that we were given a pre-production copy to review, by Core Design, and this version did not contain a training option.

We felt that this spoiled an otherwise good game and marked it accordingly. When Core released the game, they included a training option. We were informed of this and we changed the mark accordingly. We were all happy with this arrangement. No big deal.



Surely it is better to acknowledge our mistakes and let you, the punter, know if we change our minds or make an omission, than to be wimps and hide our errors? So yes, we do review pre-production software, but then so does every other games magazine in the world and if we didn't then all the magazines would be hopelessly out-of-date. We have to review games before they are released so that the reviews appear in time for the release – maybe preventing you from buying a duff game, and steering you towards the ones to look out for.

We're sorry you feel cheated by this system, Chris, but we're sure you'd rather hear about the games early, than have to wait an extra two months for the same review of the "in the shops" version. Any games mag would tell you the same.

Fairly basic stuff, I'm afraid. Even the in-game plot gives me no material whatsoever to base some entertaining drivel on.

It has something to do with aliens and trapping them, using your force-field-creating ship, in less than 20 per cent of the area they started off with. You move your ship out into the open space, leave a trail of force-field then try and get back to dry land.

If you close off an area, this becomes unusable to the aliens and knocks off a few more per cent in the quest to close them down. Your ship can only move along the exposed edge of the closed area, never within it. Dead simple.

It is complicated slightly by the fact that the big main alien you are trying to trap has lots of attendant little aliens which do their best to harass you. This isn't so bad because you are only vulnerable when trying to close off a new area of the screen, but these guys move very fast so you have to be quick about closing off the screen area.

Grey squares will appear in the open play area, and sometimes disappear. If you manage to trap one of these while closing off some space then a bonus is revealed – it may be a speed power-up, or the ability to fire jolly impressive laser bolts – these can be used to kill the annoying little aliens.

You get 1,000 points for each "normal" alien you trap. The bonus for trapping the major alien varies on how little space he is trapped in – the smaller the area, the bigger the bonus.

Trapping the big alien is not the only way of killing him. On some levels, if you collect the bonuses in a certain way you can get a huge gobsmacker of a weapon, which can be used to decimate your adversary. This gives you so many points you could probably drown under the weight of them.

Graphics are all a little boring, looking very much like the kind of uninteresting superfluous detail you get when you have 32 colours but can't think of anything do with them – my mother would have called it "too busy". The sound follows trends in being surplus to requirements – a nice soundtrack would have done the trick but the lack of effort has resulted in effects that go all over the place and completely miss the point.

The necessarily repetitive gameplay builds tension in a way that frustrates very quickly and makes you want to go and hit something, rather than making you want to try and beat the thing.

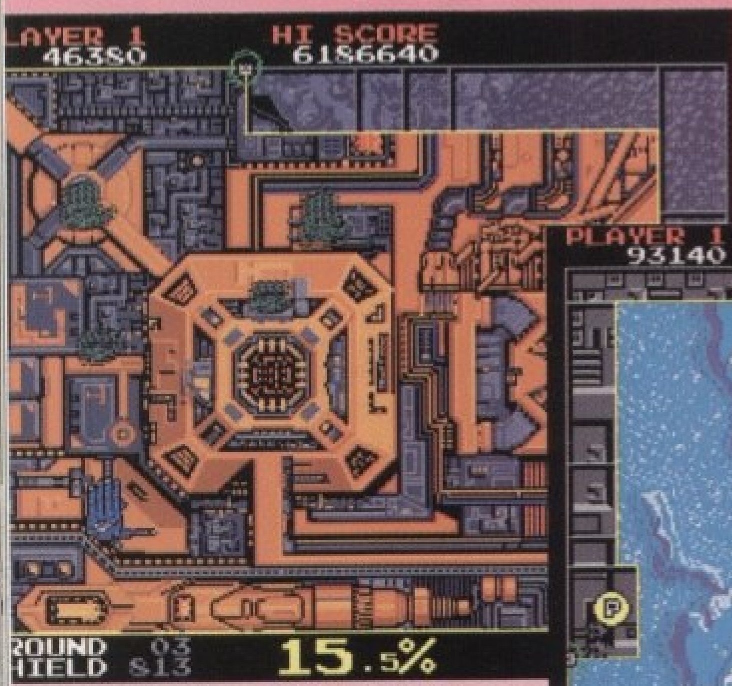
That is about the size of what is really a very basic game. It did well in the arcades, but is less likely to be successful on home formats – there just isn't enough there to warrant spending this kind of money on nothing more than a lot of levels of the same game that get a bit harder every time. Variety does not equate to Volfied.

Jools

Mad, bad and occasionally bad tempered

VOLFIED

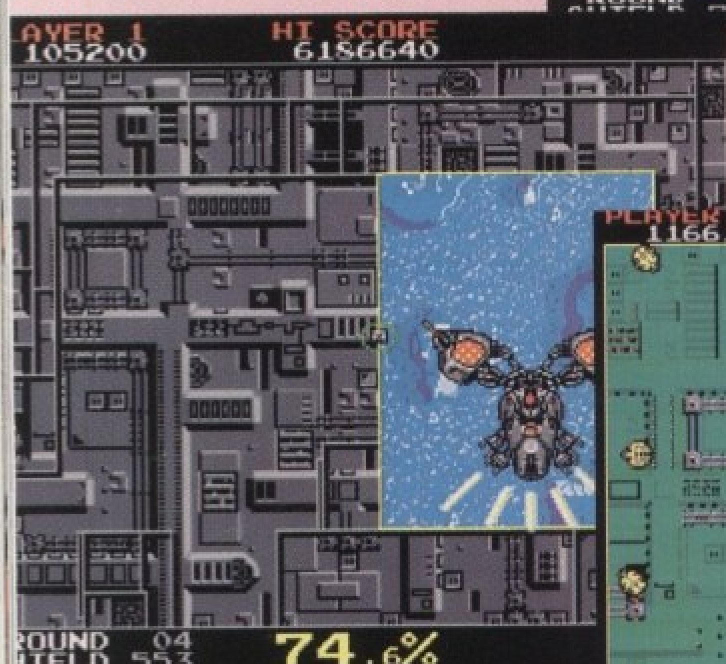
EMPIRE ▪ £19.99 ▪ ½ meg ▪ Joystick ▪ Out now



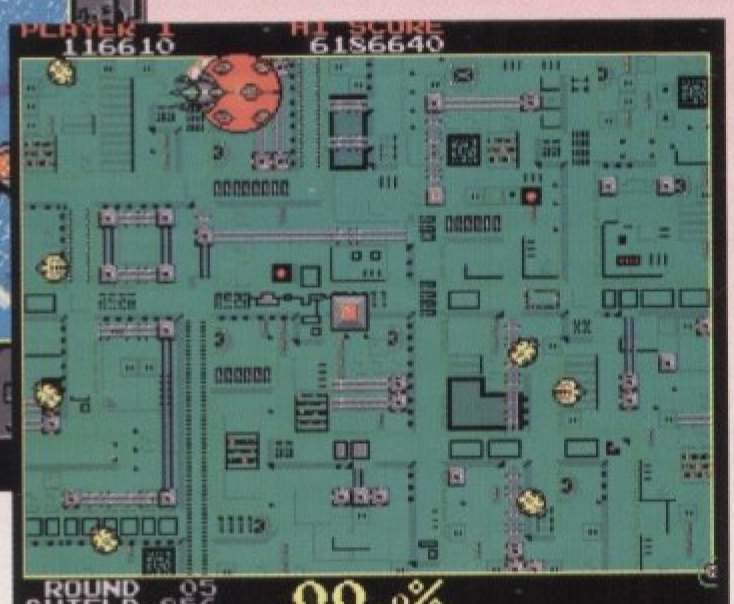
Gaining territory has been a primitive instinct of mankind for thousands of years...



...and the more it involves driving a tiny little spaceship around, the better, it seems..



...of course when big bad aliens turn up to disrupt things, the Rambo comes out in us all...



...no-one can resist the adrenalin rush of hunting something down and trapping it in a corner

VISION

Loads of detail there for no effect.

AUDIO

Again, the effects are irritatingly excessive.

PLAYABILITY

Good fun at first but ultimately frustrating.

ADDICTION

Too annoying to come back to too often.

60%

The Beach Boys return – Ba-ba-ba-Barbarian

BARBARIAN II

PSYGNOSIS ▪ £25.99 ▪ ½ meg ▪ Joystick/keyboard ▪ Out now

Life as a triumphant adventurer was a happy one for Hegor. After the victory over his evil brother Necron, avenging the murder of his father, he was in line for the throne.

The nation's elders were a tad concerned about this possibility – after all, finding a decent mixture of brains and brawn these days is difficult, one generally comes without the other and, well, Hegor was best known for his brawn. Not exactly royal material, therefore, the elders paid him off with a skip-load of gold and sent him away to get smashed for the next few months.



Any man with this many ribs deserves to be killed

He spent the time drinking a lot and boring the inhabitants of the nation's taverns with tales of how he defeated Necron. But life as an ex-triumphant adventurer was not quite so happy. When some gossipy amazon ruined Hegor's reputation by telling him that Necron had been resurrected, things had to be done. How could Hegor blag a pint or two of mead in the evenings if his story had been discredited? How could he hold his face up in public again? How could he get free silk underpants from the girl in "Ye Olde Sockke Shoppe" if she couldn't fancy him any more?

He knew what he had to do. He had to get kitted out, tooled up and throw in his gauntlet – Necron must be defeated.

It is up to you to control Hegor through the six domains of this game. It starts in the forest as Hegor tries to defeat werewolves, Neanderthals and ogres, then progresses through the caves under the village, through the village itself, into the castle, down into the dungeon, then finally into Necron's temple.

The problem is that Hegor begins with no weapons whatsoever, meaning that the first forest involves him bashing as many people as possible with his bare hands so that he can get together enough gold and stuff to make himself slightly harder.

The screen layout of the forest is a little weird and takes some getting used to. Imagine it as a maze made up of a number of interlinked paths at right angles to each other. The path you are currently on is displayed from the side so that you can clearly see the action as you roll and punch your way to freedom, with the connecting paths going into or coming out of the screen. Initially, as you move on to another path, it is a little disorientating – trying to re-establish which way you are facing and so on – but a compass and a bit of mapping paper will see you right.

Baring all before you meet your death





These spidery thingies display a disturbing penchant for flashing your belly at you

The gameplay on this level is very simple. Basically, just avoiding being killed by some very thick adversaries. But as you progress through the levels the game expands into more than just a beat-'em-up, requiring you to solve puzzles to find secret doors and reveal traps.

For example, in the castle you are required to pull chains, but not to flush out the bad guys. Usually they will be in a group of three which must be pulled in the right order to open the door to the next room. Something else to watch out for are hidden floor panels which will often counteract the effect of the chains you have just pulled, frequently sending you to oblivion.

As you move into the dungeon you realise that the enemies are beginning to get a lot harder. For the first time you will come face to face with the undead. They can be knocked down for a while but they are completely unkillable, the point being that they are already dead. You really have to work fast on those switches with these attractively dressed chaps around.

Hegor, once he has collected them, can use different items to help him with his quest. On top of all the usual axes, potions and weapons there are things like grappling hooks, which can be used to hoist you out of tricky situations. Naturally there will be the odd shop around the place, usually in the most bizarre of locations, but only if you've remembered to collect all the gold you can will they be of any use to you.

Big red blobs in bouncy bouncy shocker



VISION
GGGG
Gets progressively better throughout the game.

AUDIO
GGG
Good tune but average effect.

PLAYABILITY
GGGG
Great fun, enjoyable and a real challenge.

ADDICTION
GGGG
Necron won't stand a chance, because you can't stop.

84%

Graphically the backgrounds are well up to standard, particularly in the latter dungeon and temple levels. The sprites usually disintegrate and bleed in a comic book gore kind of way, and that comic book feel is most clearly demonstrated by Hegor himself, looking like something straight from the pages of the Beano as he rolls and tumbles his way about.

A typical Psygnosis tune is in evidence, very reminiscent of castles and dungeons and heros and stuff. The effects, though not brilliant, are just tough enough to make you think that that enemies probably do actually hurt you.

All told, it adds up to a very playable package continuing in the hallowed tradition of the original Barbarian, and goes a little beyond the traditional beat-'em-up gameplay to provide extra depth. Coupled with the difficulty level it makes it quite a challenge. Pretty damn good.

Jools

At last! A word that rhymes with meander

LEANDER

PSYGNOSIS ▪ £25.99 ▪ 1/2 meg ▪ Joystick ▪ Out now

Princess Lucanna had just turned 18. In fact today was her birthday. But today was the day that Thanatos decided to rise from his "pit of anguish", depart his prison of torment and take revenge for whoever had trapped him in this interminable prison. He deserved it though – he was officially classed as evil.

The rulers of Honshu, where Lucanna lived, were the nice chaps who had put him away, and it was them that Thanatos, or Thanny for short, was after.

To cut a long story short, one full of needless long words and sentences (see manual), Thanny kidnaps Lucanna and intends to use her life force to feed his own and ultimately destroy Honshu. Leander is the palace guard who's been bonking Lucanna on the quiet. They both reckon it is undying love, but listen to an old hand, it is pure lust.

The emperor summoned Leander and told him he knew about the illicit trysts in the garden but would forgive him if he rescued her. Better to have a live shotgun wedding than a dead daughter. Assuming, of course, that Leander could manage it.

Well it sure sounds like a beat-'em-up to me, and, gosh, I'd be right. The game is made up of three worlds each consisting of four levels, where a single quest has to be completed. This will usually involve collecting something from one end of the level and trekking back to the exit point at the other end with it.

Well it isn't quite as simple as that. The levels aren't linear, they go in all directions and need a lot of exploration and mapping before they can be conquered with ease on a regular basis.



The teleport. Not manned by a big irishman called Scotty

The game is populated by numerous assorted creatures, from elves to dragons to huge spiders that would put the willies up any self-respecting arachnophobe. These can be slain with a few swipes of the sword but they are cunning little devils, and it takes a lot of care to get away without being hit at least once as you try and kill them.

Fortunately though, as you leap and bound across the graphically superb backgrounds, there will be a load of chests and trunks littered around. A few sword swipes will open these to reveal some kind of bonus, be it money, points or armour improvements.

These armour improvements will take you to the next armour strength level. You begin on purple armour which only takes one hit point – take a hit and you die. Green provides two hit points, with the protection climbing one hit point per level through blue, silver, gold and finally black at six hit points.

The money can be used in the shops that you will occasionally stumble into. You could blow it all on a huge weapon but it is worth thinking about building up your armour first – you stand more chance of getting further the stronger your armour is.

Rune bombs can be bought in the shops too, or collected from the chests. These are essential because if you make the mistake of not picking up something that comes out of a chest, after a short period of time it will turn into a skull.

If this is accidentally collected, the ethereal presence of Thanatos will appear, with thunder and lightning all about. Only rune bombs stand a chance of thwarting him, but it will take six hits to get rid of the ugly little bleeder.

It is fairly slow-paced initially with little frantic action – the emphasis is on exploration, and accuracy with the joystick as you try for the fifth time to catch that moving platform. Skill with the sword is crucial though – you won't be able to get away with auto-fire in Leander. A far more thoughtful game than some.

It takes on a medieval atmosphere almost as soon as you enter the first world. The graphics have an almost musty feel about them that puts you right back in the golden age of virgins and dragons.

The background colour-slitting and all that techy stuff is excellent and some of the foreground stuff occasionally beats First Samurai, but there isn't enough variety to do this on a permanent basis.

The sound is by a team led by one Jon Burton (apparently he's quite famous for this kind of thing), with a typically spooky Psygnosis tune, and violent effects that, believe me, go some way to bringing out the armoured agressor in all of us.

It is definitely a serious beat-'em-up, well implemented, quite gorgeous to look at, and a treat for the ears. Pretty top.

Jools



The panto season begins in earnest: "Behind you!"



Never in this kind of game do you find a shop without a buxom wench



Tiny jap hero in swinging balls scandal



VISION – GGGG
A little repetitive but what's there is is damn good.

AUDIO – GGGG
Moody tunes and violent effects.

PLAYABILITY – GGGG
Huge levels and tricky enemies combine for a big challenge.

ADDICTION – GGGG
Nothing will abate your lust for the princess.

86%



Growl at the postman, comb your face and welcome...

WOLFCHILD

CORE DESIGN ▪ £25.99 ▪ ½ meg ▪ Joystick ▪ Out now

Wolves. brilliant, aren't they? Great big hairy dog things. And werewolves? Even more brilliant. All that prowling around and drooling at people. That's the life. Dracula? A wishy-washy ponce. Frankenstein? A limp-wristed girl's blouse. The Mummy? Yawn city. But werewolves? Werewolves are, if you'll pardon the phrase, the gnu's gonads.

And Core Design seem to agree with me, for their new release stars a lovable lycanthrope as it's hero. Not your traditional "bitten by a mysterious animal on the moors" werewolf, but a "genetically created futuristic robomonster" werewolf. Obvious really.



Wolfchild takes this opportunity to show us his new fitness video



Grrr. If you don't leave me alone, I'll hump your leg to death

You see, it all began when Kal Morrow, a dead brainy genetic scientist bloke, was kidnapped by Chimera, one of those evil organisations who like nothing better than to kidnap dead brainy scientists. Unfortunately, they reckoned without Saul Morrow, Kal's son.

Saul decided that the game would be a lot more exciting if he got up off his bum and did something about it, and so he injected himself with some of his Dad's Wolfchild fruit cordial. And hey presto! He becomes a werewolf and sets off to dribble a lot and menace lamp posts..

His quest begins as his spaceship descends towards the Chimera base, and Saul must fend off the mutant Birdmen on the hull. This accomplished, he must fight through a jungle infested with, er, jungly things.

Then, without pausing to adjust his breeches, he dives into some dank and spooky caves to fight insecty things. No rest for the wicked, and he leaps straight into the Chimera base for the penultimate showdown, before striding manfully into the main control centre for the obligatory Final Conflict.

Of course, what it all boils down to is a scrolling platform game with a liberal sprinkling of beat-'em-up. It's the sort of gamestyle that's currently setting the consoles alight, so it's likely that we'll see quite a lot of it in the future. Luckily for Core, Wolfchild is the first of these games out of the proverbial gate, so they could be on to a winner here.

And with presentation like this, it's not surprising. The graphics are excellent. Loads and loads of detail, topped off with some of the swishiest parallax you'll ever see. Add some decidedly yukky mutants to beat up and you've got a game that's just the thing to stick two fingers up at the Megadrive contingency.

The twist here is that once your energy reaches 75 per cent or higher, a bolt of power bursts all over the shop and you sprout unsightly hair from places you didn't even know you had places. When in werewolf mode, you're not only twice as 'ard as before, but you can now project magic energy as well as relying on physical prowess to defeat your opponents.

Or to put it another way, you can fire rather than just punch. The bullets are, as always, upgradable and vary from three-way fire to heat seekers. No surprises in that department, then.

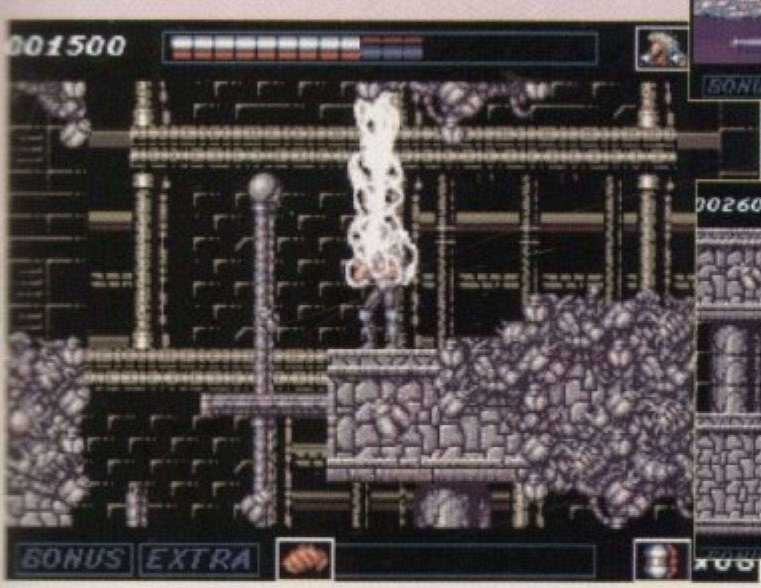
So, Wolfchild is a visually impressive, reasonably playable console beater. If you need any persuasion then I'll tell you that it was written by the bloke responsible for Switchblade.

Nuff said. It lacks that extra depth that it needs to get the coveted Gamer Gold but it looks, sounds, smells, tastes and feels like a "quality game". Surely that must count for something?

Daniel



Open air confrontations on the spaceship



Changing in public always was embarrassing for Saul



Time for a quick game of "tag" with the mutie insects

VISION — GGGGG
Just the thing to annoy the console owners!

AUDIO — GGG
A fair tune and a great sampled hoooowl!

PLAYABILITY — GGGG
Lacking depth, but pitched just right.

ADDICTION — GGGG
More fun than chasing cars.

86%

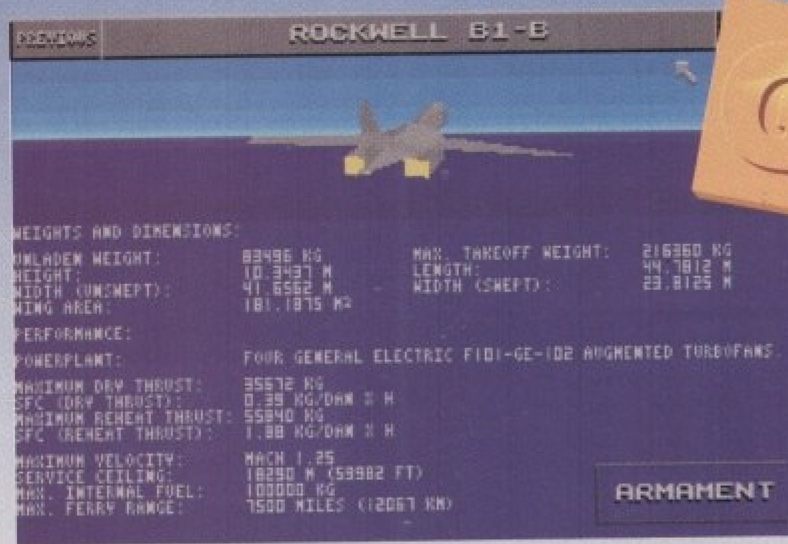
Pick a plane ... any plane

BIRDS OF PREY

ELECTRONIC ARTS ▪ £34.99 ▪ 1 meg ▪ Joystick/mouse/keyboard ▪ Out now

After almost five years of development and speculation, a finished version of Argonaut Software's Birds of Prey (BOP) finally landed on my desk today. Surprisingly enough, there were no owls hooting, horses eating each other, and all that stuff you normally expect when something long awaited comes to pass – so I just booted up.

BOP was coded by Jez San and his team, from whence came Starglider 2, one of the all-time Amiga classics. It offers a choice of squillions of different aircraft depending on whether you decide to be a "good" guy or a "bad" guy, it flies smoothly considering how many other planes the computer controls at the same time, and it makes the tea when you get tired of carpet-bombing little villages in South East Asia.



When choosing planes, there's plenty of tech specs so you know if it will do the job

How does it play? Well, it's a bit like every flight game you ever wanted, but couldn't be bothered with because they're all just boring variations on the theme of "how can we make lots of money from cunning flight algorithms?". BOP is a great game, not a great simulation, so members of the Society for the Appreciation of Differential Calculus (S.A.D.) needn't buy it.

The action is set in a fictional landscape of land, sea, and islands, but all the aircraft are real. You can take off from a main airbase in a B-52, or ski-jump from HMS Invincible in a Harrier, and if you get bored with "good" guy planes, it's easy to swap sides and fly in a Mig-29 or Backfire bomber.

After the manual protection is over (you have to answer a question on the technical details of an aircraft or missile) you jump to the pilot screen. Here you can load and save pilots, or create new ones, then it's time to get down to business.

First you select what sort of mission to fly. There are twelve to choose from, including the unusual options to drop parachutists or supplies, and test fly the X-15 or Mig29. Next comes the all-important choice of home base.

There are five of these for each side (Blue and Red – but it's hardly a coincidence they made the Soviets the Red team, is it?), two of which are aircraft carriers. Blue carriers are the Nimitz and Invincible, Red carriers are the Kiev and Minsk, but Russian carrier pilots are restricted to a choice of one aircraft, the Forger, as it's the only carrier-borne, fixed-wing plane the Russians have got.

If you go for a land-based pilot, your choice is far greater. There's a Tupolev Bear bomber, a Hercules, and you can even fly a 747. The more obscure aircraft include the F-20, the SR-71 Blackbird reconnaissance plane, and the Su-25 Frogfoot (Russia's equivalent of the A-10 tank buster). There's enough variety of missions and aircraft to give BOP the best long-term interest appeal of any flight game I've ever seen.

All aircraft are represented accurately in 3D, and they all fly more or less differently. Realism hasn't been insisted on, and where two aircraft are fairly similar you can, for example, find it difficult to believe you're in an F-16 rather than the Mirage in which you flew the last mission.

In more extreme cases, though, the feel of a Hercules is vastly different to any of the jet fighters. A bit like flying a phone box through a syrup-filled swimming pool, in fact.



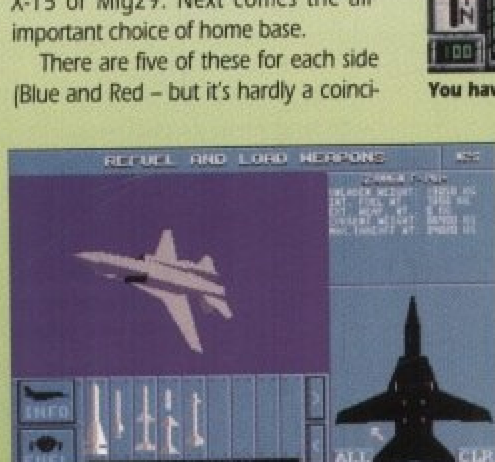
You have to bring a few pressies to this party, my friend!

If you haven't tinkered with the scenario and difficulty settings at the pilot screen, you'll start the game on Pilot level (the second of four difficulty levels) in the Green Fields scenario. If you're a big fluffy domestic fowl, you can downgrade the opposition by choosing Rookie mode, or if you're more of a child-eating household pet, there's the Squadron Leader and Wing Commander modes.

Which base you selected will have determined what side you're on, but once the first mission is over you can fly from any of your side's bases and in any of your side's aircraft types. What you must always remember, however, is that "your side" and "their side" are going at it hammer and tongs all the time.

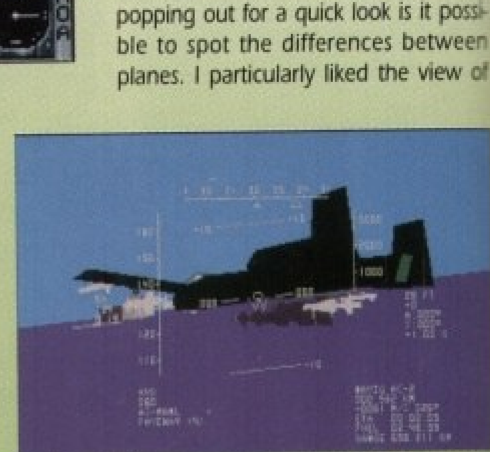
Once in the air, you can select the full screen view and then swap views to any of the aircraft presently in your sector, including enemy aircraft. This gives you an excellent feeling of being in a larger conflict rather than of being one small plane out to save the world. It's also fun to sit comfortably in a B-1 bomber at 50,000 feet and keep tabs on your fighter escort as they battle it out with Migs thousands of feet below you.

The other outside views are of your own aircraft. The usual views are implemented, eight angles and a satellite overview, but they add a lot to the atmosphere because every plane has an identical cockpit layout, and only by popping out for a quick look is it possible to spot the differences between planes. I particularly liked the view of



Get your weapons of mass destruction 'ee-ere!


A tooled-up A-10 rolls out of the hangar


Funny looking floating tanks are easy meat for A-10's



The twelve mission types are so different. There are a few which don't involve killing someone!

my A-10 complete with oodles of bombs and things dripping from below the wings. Yum!

The rear view of a Hercules is fun when on a drop mission. This initially gives you a black screen because you're actually looking back into the cargo hold. Once the door is opened, however, you can see the parachutist drop out the back of the plane and open his canopy. There's a certain amount of sadistic tension involved when you wait for the chute to fail to open, but it hasn't happened yet in any of my missions.

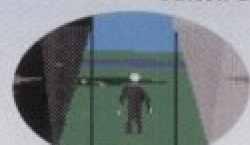
On the strategy side of things, you can call up an AWACS map of the entire battle area and zip around to spy on what everyone else is doing (hint – they're all trying to kill each other), and when in flight there's a radar map of your immediate surroundings which you can zoom in and out of.

This is great for figuring out where that pesky Mig-25 just went, and for working out which tanks are friendly. Shoot a friendly target of any kind, and you're labelled a traitor and forced to swap sides, so it pays to check (A-10 pilots please take note).

When you and your comrades have liquidated enough of the enemy's assets, you're treated to a victory screen and you can go on to another scenario. If you don't, you better start getting used to the humiliation of potato queues or revolting daytime TV depending on your original nationality.

With a steady advance through the ranks, so much going on around you, the numerous ways of playing the game, and the vast size of the playing area itself, Birds of Prey is easily the most addictive and playable flight game on the market. Realism buffs will be advised to go for Flight of the Intruder or ProFlight, but those of us born with the need to stuff Mavericks down the throats of computer-generated bad guys will lap up this game like a starving cat at a bowl of catnip-flavoured cream.

Anton Black



VISION

Ground detail is a bit sparse but the aircraft are well sculpted.

AUDIO

Very good for a flight game, with nice missile whooshes and dead tank boom-a-bangs.

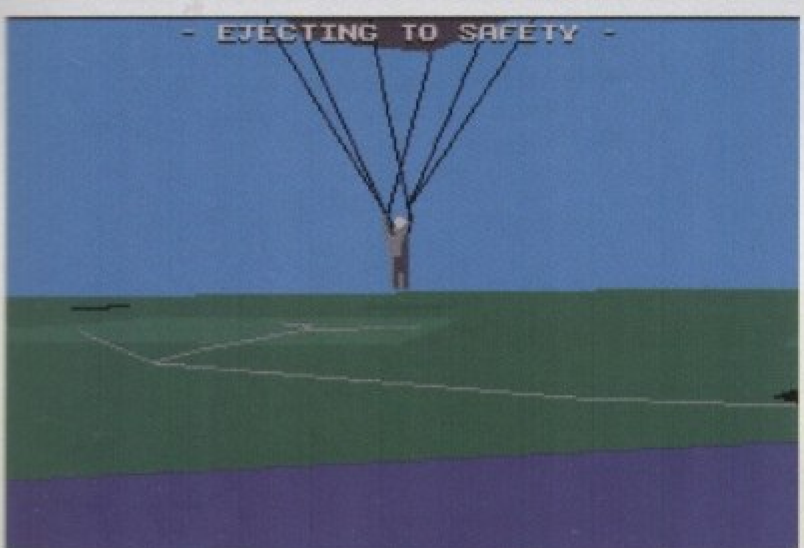
PLAYABILITY

More! I want more! Can't put it down!

ADDICTION

You'll have to be surgically removed from your Amiga.

94%



Fail to avoid that AA-8 Aphid, and you've got a long floating scenic trip ahead



Stealth fighters are so ugly, they HAD to be made invisible to radar

HAKPAK

The HakPak cheating continues. You've had them on card, now you've got them on paper. What'll they be on next? Watch this space...

HAKPAK

GAMER HAKPAK

PLATFORM

Toki
Ocean

During the intro sequence, press Escape then type POORTOKI. Start the game and press Escape once the map screen has passed. Pressing the function keys during the intro will now allow you to skip levels.

Venus The FlyTrap
Gremlin

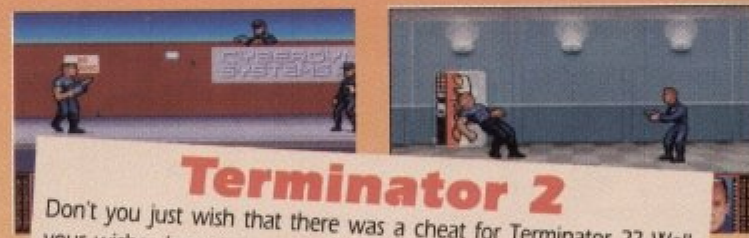
Press spacebar on the title page to enter a cheat. Type in JUPITER for infinite time. Type FREEPLAY for infinite credits and type in PLUTO for infinite Ammo.

Prince of Persia
Broderbrund

PRINCE OF PERSIA – Broderbrund
While playing, press and hold down Caps Shift and press L. You will be transported to the next level. Be warned – this doesn't work on the bottle section.

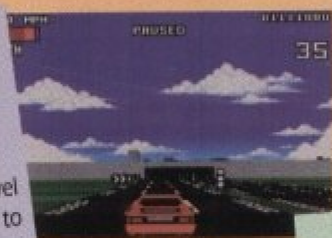
Biffa's cheat mode

Hi ho, hi ho, it's off a-cheating we go!



Terminator 2

Don't you just wish that there was a cheat for Terminator 2? Well, your wishes have just come true because we've found one. To activate the cheat, pause the game, press each F from F1 to F10 key once, then press Fire to unpause the game. Now press that lovely Esc key to skip levels. Hasta la Vista, you cheat!



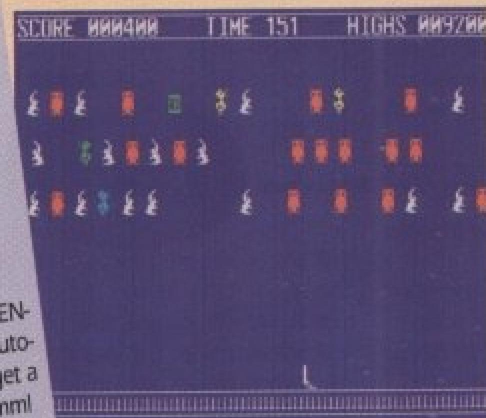
Lotus Turbo Challenge 2

Aaaarrrrrgggggghhhhhhhh!!!! If any of you damn readers send me the level codes for this damn game again I'm going to come round your house and shoot you. I already know the level codes for Lotus and every single cheat mode letter has had the damn things on.

But for those of you who want the level codes for this rather impressive game, here they are...

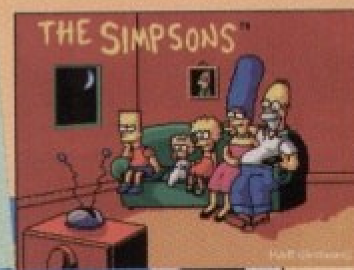
Level	Level name	Password
1	Forest course	No password
2	Night course	Twilight
3	Fog course	Pea Soup
4	Snow course	The Skids
5	Desert course	Peaches
6	Motorway course	Liverpool
7	Marsh course	Bagley
8	Storm course	E Bow

Other little snippets include typing in TURPENTINE to get infinite time and DEESIDE for automatic qualification. If you type in DUX you get a mega-tabulous bonus game. Brumm Brummm!



Bart vs the Space Mutants

Woh man, Bart here to tell you the utterly bodacious cheat for my mega-game. All you do, dude, is type in COWABUNGA on the title screen to get infinite lives. Check it out and get to bed...





Rodland

Are you having trouble helping Tam and Rit rescue their mom? Well here's some Help. Pause the game, then press Help five times, and as if by magic you'll have gained infinite lives. Hurrah!

New Zealand Story

At the request of reader Gillian Hoy, I am going to print a cheat for New Zealand Story. The cheat for the original version of the game – the one that came free with the Batman pack – is (ahem): MOTHERF**KENKIWIBA**ARD. Add the letters, U, C, S, T and there you have it, lots of naughty words!!

The real cheat is this: press Del and then M, then enter FLUFFYKIWIS to get infinite lives. "-a+9" should appear at the bottom of the screen accompanied by the sound of the book – if the cheat works. Pressing HELP allows you to skip levels.

The Dream Team

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ruth priestley
0625 878888

Boing! "Time for bed" said Zebedee

climax

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PUZZLE & QUIZ

GAMER HAKPAK

CHIPS CHALLENGE – US Gold

Start the game as normal and press **F** – you will find that the screen flips upside down. Type in **SAGITTARIANS MAKE BETTER LOVERS.** for keys, shields, magnets and ice-boots. Typing **09/12/57** gives unlimited time. Typing **I THINK THEREFORE I AM.** means that you don't have to collect the chips to escape. Remember to include spaces and full stops. Now by pressing **C** you skip levels and by pressing **F** you will return to the game.

VAXINE – US Gold

Start the game as normal and type in **WILDEBEESTE.** Now use the following keys to skip levels.

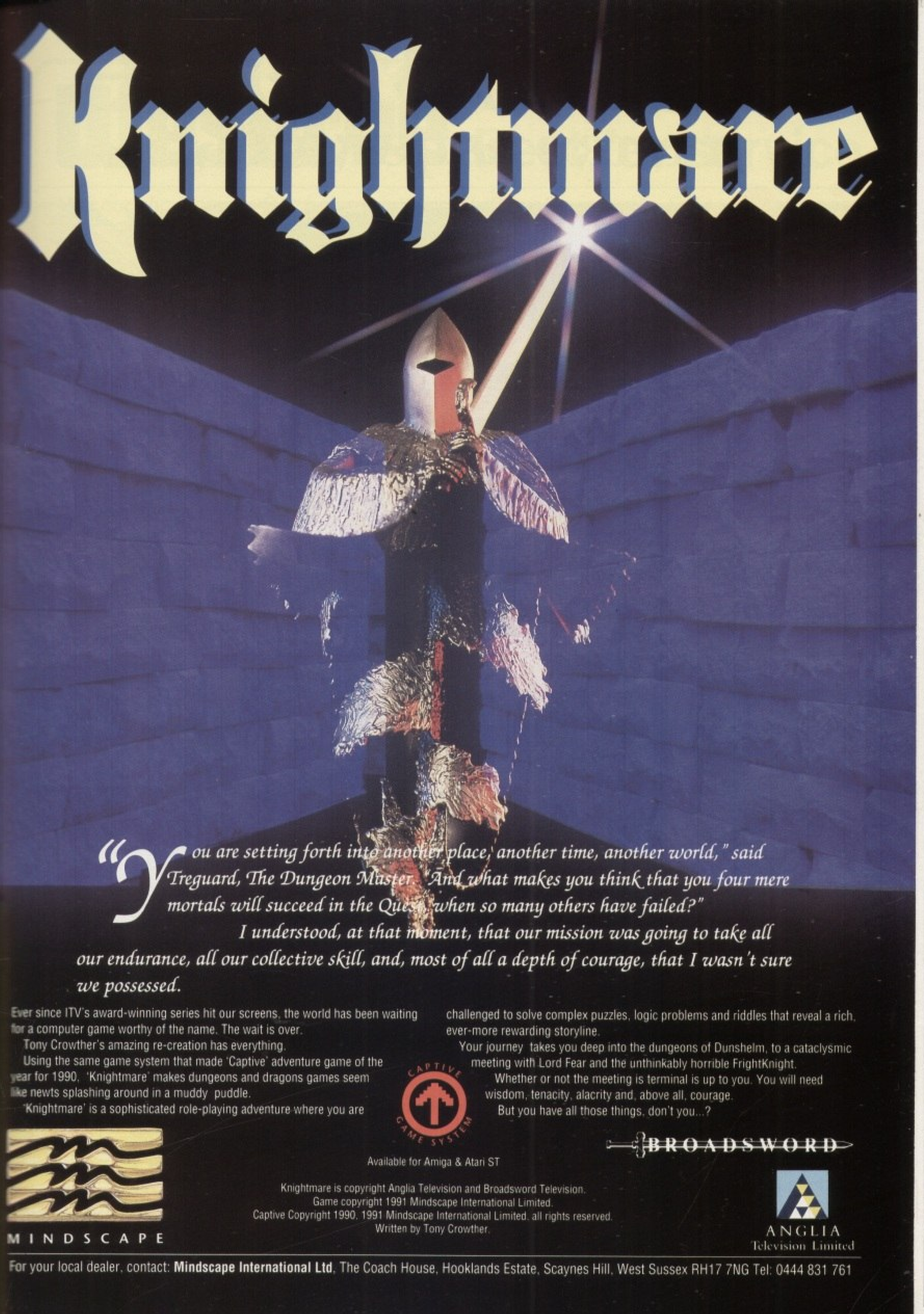
- **F1** Advances one level
- **F2** Retreats one level
- **F3** Advances ten levels
- **F10** Advances one level and you get a bonus



LEMMINGS – Psygnosis

I know you have already got the Lemmings level codes on a previous Hak Pak, so here are all the 2-player codes.

LEVEL	CODE	LEVEL	CODE
01	JAJHLDIBMO	11	NMMDIJALMN
02	IJHLDIJCMX	12	HMDIJINMMW
03	NHLDIJADMU	13	MDIJAJLNMP
04	HLDIJINEMN	14	DIJIJLMOMY
05	LDIJAJLFMW	15	IJANLMDPMV
06	DIJIJLLGMP	16	JINLMDIQMO
07	IJANLLDHMM	17	JAJHLFIBNR
08	JINLLDIIMV	18	IJHLFIJCNK
09	JAJHMDIJMX	19	NHLFIJADNX
10	IJHMDIJKMQ	20	HLFIJINENQ


Knightmare
"You are setting forth into another place, another time, another world," said Treguard, The Dungeon Master. "And what makes you think that you four mere mortals will succeed in the Quest, when so many others have failed?"
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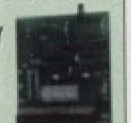
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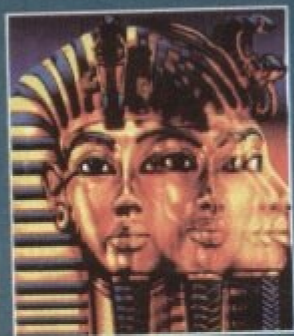
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The Gallery

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Yes folks, it's that Gallery time of the month again and this month we've had a really good selection of pictures sent in.

The first is called *Judge Anderson* and it's by Jeffrey Miranda. As you might have guessed it's a picture of that famous PSI Judge from the pages of 2000AD – well done Jeffrey.

The next budding Picasso is a Mr W Kelling who has drawn quite a few excellent pictures, two of which we thought were particularly good. The first picture is entitled *The Exorcist* and looks really sinister in those dark colours. It sent shivers down my spine, I can tell you.

The second picture is of old Arnie Schwarzenegger in a *Terminator 2* pose. Both pictures are of excellent quality – top marks Mr Kelling.

Deciding the winner of this month's Gallery was very, very difficult indeed, but we got there in the end. In second place is Mr R A Rolph with his excellent fantasy pictures entitled *Tales*. The detail on this one is absolutely stunning.

But the winner is Lee Martin, with his brilliant portrait of *Madonna*. Done in hi-res, this picture is really one to behold. Lee sent in quite a few pictures – Madonna's the best, but is closely followed by his picture *The Cat*, not of the feline variety, but of Prince's ex-dancer.

Incidentally, Lee wins a copy of Electronic Art's Deluxe Paint IV and a framed copy of his winning picture, so that he can hang it on his wall and impress all his chums.

Do you think you can do better? If you can send your disks to:

Jonathan Maddock, The Gallery, Amiga Computing,
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Please remember to include details of how you created your picture(s), plus your name, address, telephone number and what format the picture(s) are in. Good luck!

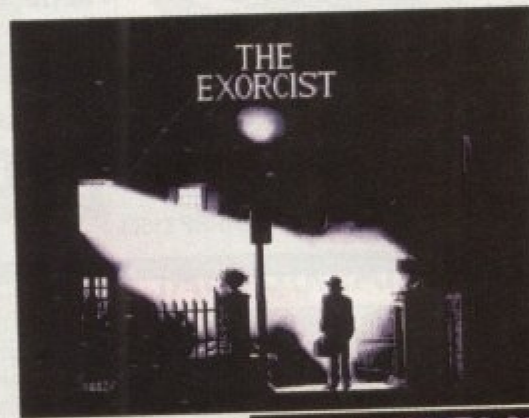
This month's WINNER



Madonna



Judge Anderson



The Exorcist



Terminator II



Tales



The Cat

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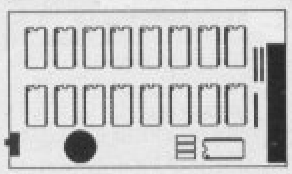
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The learning curve

I never normally write letters if I can get out of them gracefully, but on this occasion I do it happily. I was forced by the very expensive pricing in this country to look elsewhere for hardware and I eventually ordered some goods from the USA (Adspeed/AdRam540 and a bare Quantum 52Mb hard drive). I also ordered some bits from the UK (Podscat/Techosound/Vidi) plus some software.

The US orders went very wrong. The Quantum money never got to the suppliers and the retailers of the other two boards have not supplied the goods (money sent 31/8/91 and definitely received in the US). However being a regular reader of your magazine I wrote to three of your advertisers, two big and one small (by comparison).

The only firm to reply was Applied Research Kernel. The owners have been terrific – they wrote giving firm quotes and when I phoned they were more than helpful. They knew their subject throughout and if unsure of something found out for me quickly.

I feel that such good service deserves recognition especially if your overseas readers wish to purchase goods and do not know who to trust. I therefore wish you to publish this letter so as many of your readers as possible get the information I had to find out for myself. As you can see the US has failed me badly, so in future I'll be dealing with ARK.

By the way I own an Amiga 500 expanded with a hard drive, genlock, colour Vidi, colour printer, Technosound, four megs of RAM plus 1 meg chip, colour monitor, Podscat (I can't draw). I am into DTV, programming and so on. Are you interested in anything in the way of articles from the bottom of the world?

K H Antoine, Brisbane, Australia

I guess that companies in the USA are just the same as anywhere else – some are good and some bad.

Sorry to hark back to my "small is better" crusade but your experience seems to be the proverbial proof of the pudding.

As for being interested in articles from Australia, Stevie (the new editor) tells me he will consider publishing work from anywhere as long as it's good, cheap and on time. He also said something about needing someone else to reply to readers' letters...



Write away!

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Please don't enclose saes as Ezra just hasn't got enough paper to reply personally. He might also have to shorten your letters, so don't be offended if you get the chop.

Is it *Adios* Amiga?

One of your readers asks if other Amiga owners have experienced slow service from Commodore. You bet I have!

I bought an Amiga 500 in May. It broke down after five weeks, and the national repair centre took six weeks to return it. Two days later it broke down again, and has now been away for another three weeks, with no sign of returning. I have seen the machine for only seven of the 16 weeks since I bought it. My letters to the centre have not resulted in any meaningful response.

Needless to say, my initial enthusiasm for the Amiga has evaporated, and my opinion of Commodore has taken a nosedive. I am on the point of writing off the Amiga as an expensive mistake. And of course, I will hardly be encouraging anyone else to buy an Amiga.

So whether or not the warranty service is operated by Commodore or by an agent, it cannot be in their interests to be associated with such poor service.

K Grainger, Dalston, London

Crikey, all these complaints about FMG in a single letters batch! I can't blame you for being a bit disen- ➤

After sales disservice!

PRIZE LETTER

First to praise your magazine. It is excellent, easily the most informative, incisive, witty and most of all helpful. I have been reading and enjoying it since issue one (Enough – Ed).

My setup is as follows: Amiga 1500, TV with Scart and a Star 24/10 printer. Next on the shopping list is a hard drive.

This is not your problem really but my gripes with Commodore and FMG. I bought my 1500 in April '91 and sent my registration card to FMG as instructed. In May I moved and had all mail forwarded, but nothing arrived. On the 21 August, 1991 I wrote to FMG asking abut the Customer Care pack and card.

A week later I phoned FMG and was given a number for Commodore, who told me to phone FMG. I told them that I just had and been given this number. After speaking to Marketing, I was told that the Customer Care pack was stopped but that something would be in the post within a week. One week later I phoned the same person at Commodore and was told to wait one more week.

Well, not a sausage from Commodore, instead on 9 October I received a letter from FMG telling me what I already knew, that the Customer Care pack was stopped, but still nothing about the wonderful Customer Care card.

I phoned FMG on the 11 October and was told that the Care Card was also stopped "but let me transfer you to Julie". After waiting for an expensive five minutes my patience ran out and this letter took hold.

My gripe is this – after being promised both a Customer Care card and Customer Care pack by the literature that accompanied my lovely computer, both Commodore and FMG had to be pushed to reveal anything. I still do not know if my computer is registered and I have heard nothing about the extended warranty that I requested.

Thank you for reading this (if you did) and for the great magazine.

M Palmer, Melton, Mowbray

What do you mean "Thank you for reading this (if you did)"! – I read every letter sent to me and I even read some of them twice!

Listen, the Customer Care pack is no great shakes. I got one when I bought my A2000 a year and a half ago. It's basically an A5 plastic folder packed with adverts and order forms for other Commodore bits and bobs.

The mysterious Customer Care card is a credit card-sized bit of plastic with the date you bought your machine etched onto it. It doesn't work in a cash machine, but it does get ice off your windscreen.

It seems a shame that you got such a runaround for something that isn't really worth the bother. My guess is that your machine was shipped with an old warranty card, hence the references to Customer Care gumph.

The important thing is to make sure your machine is registered. I think you can rest assured that it is if you have had correspondence from FMG.

I'm surprised that you haven't had any word back about your extended warranty. If your payment has been banked, I would contact FMG to find out what is going on. If not, send another form in.

Programming pointers

I would like to learn computer programming in Cobol on my Amiga. It must be possible. The Amiga is capable of anything, or so they say. Can you help me on this matter – what do I need, where can I get the equipment, and how much roughly will it cost?

I've tried asking several companies who do courses in Cobol programming, but all they seem to do is try and sell me an IBM-compatible Amstrad computer and course work for hundreds or even thousands of pounds.

I would appreciate any advice that you can give me.

A S Jobe, Portsmouth

I've published letters like this before, asking for help, with no response.

Come on guys 'n' gals, is there a PD version of Cobol hiding out there?

The first person to locate and send me one will get a prize. There, can't say fairer than that.

chanted about the Amiga. But how do you know how good it is if you have only had one for seven weeks?

Take a look through the rest of this issue of *Amiga Computing*. The Amiga really is a great machine!

The fact that FMG are getting into such a mess fuddle again and again means that Commodore really do have to take some action, in my opinion at least.

I think the time has come for Commodore to issue some sort of statement. If anyone from FMG or Commodore who reads this page wants to step out and defend the national repair centre please write in. I can feel an ESP Special coming on...

Hard and fast

As one of the rapidly growing number of Amiga hard drive owners, I totally endorse the contents of Stein Erik Giske's letter in the November issue of *Amiga Computing*.

I feel that it is the responsibility of your magazine to inform potential buyers if a piece of software can be installed on a hard drive, and if it is compatible with faster processors like the 68030.

Contrary to what is commonly stated in the monthly magazines, a large proportion of Amiga games can be installed on a hard drive.

Most adventures and simulations (with the exception of F19 Stealth Fighter) are hard drive compatible, and, in general, it is only arcade type games that still have irritating on-disk protection.

Let me say that certain companies are particularly guilty of using on-disk protection and therefore are treating Amiga users like children – try that in the PC market or in the USA and see how many sales there are!

All the users I know – including myself – will not buy software from these companies, as loading from floppies is a real pain if you have an alternative. Also, if software has heavy on-disk protection then the AmigaDos guide-lines are bypassed, and the software is not compatible with faster processors like the 68030.

So please, let us serious users of our favourite machine know in your reviews if software has on or off disk protection, and if it can be installed on a hard drive. Surely you don't have to be informed by the software company if the product is hard drive compatible - as you state in your reply to Mr Giske's letter - you can easily try for yourself!

I Mackenzie, London.

What a bizarre suggestion, that most Amiga owners who play arcade and action games might be children!

Games companies put protection on their product to protect their investment, not to inconvenience hard disk owners.

Manual protection is an alternative, but with a little time virtually any manual system can be beaten. Books can be copied, charts redrawn and even code wheels "pirated"

The versions of software we get in to review are typically fully functional, apart from the protection which is still being added.

It is for this reason that we can't tell people if games are hard disk friendly or not. If we used our own experience, every game released in the last three months would be hard disk compatible!

Daniel and Eddie are sticking by their tried and tested line: "if games companies tell us, we will tell the readers".

Christmas turkeys

• *Our more astute readers may have noticed our, erm, cock up last month, which resulted in some letters being printed twice and one, entitled "CDTV Turkey", being started twice but never actually ended or replied to. The person responsible for this fowl deed has been given a good roasting (don't worry, we plucked him first). Here's "CDTV Turkey" in full...*

Why oh why is the structure of my chromosomes (ha!, joke).

But seriously, can you answer a couple of little questions about the Amiga? Everyone goes on about the Amiga being the only home computer with the ability to multitask. Now I'm not putting it down – I've owned one for three years and wouldn't part with it – but is it not a fact that true multitasking can only occur on a machine when there are as many processors as

Progress at any cost?

I read with interest the upgrading of the Amiga to the A500P. But at what cost to us 512k A500 owners? Software is already becoming 1 meg only due to the future A500 being 1 meg standard.

I've already got a few CoverDisks which I've never seen. Yes I know I must upgrade and I know it's cheap, but how will the updated A500P affect software?

Don't get me wrong, I think it's good news that Commodore are still showing the way but it took me two years to save the money for my A500 and months to buy my first game, only being content with your CoverDisks to keep me going (which are fantastic) but I hope we don't get forgotten over the next few years.

I wrote to Commodore about the price of the A500. I paid £411, of which £26 of this was for the games pack which I found is given out free by other shops. Why was I charged for this can you tell me as Commodore did not reply? Can you confirm what I think, that I was ripped off?

G Gocke, Port Talbot, Wales

There are very few 512k Amigas around these days. After all, it costs less than a good game to get a 512k expansion complete with battery-backed clock.

The real compatibility problem will arise when software starts to be developed that requires the very latest versions of Kickstart and Intuition.

Commodore will be offering an official upgrade path to owners of all machines other than the A1000. It requires the replacement of a number of chips, so don't count on it being cheap. It is a sensible investment though.

The recommended retail price of the A500 Cartoon Classics bundle is £399. This has also been the price for earlier bundles. If you have been charged more, it is over the odds.

There is very little you can do though, as the RRP is only a guideline – retailers can literally charge as much as they think they can get away with.

Play it again, maS

I went into the local newsagents today and while looking on the magazine rack, my eye was caught by your magazine *Amiga Computing*.

It was the first time that it has been stocked so I bought a copy. When I got home I read it from cover to cover and was very impressed. Then I decided to try out the disk, CoverDisk 24.

I played the Tune of the Month, and was even more impressed, as Toccata is one of my many favourite pieces of classical music. I briefly loaded the machine code option, then I decided to load in the utilities.

I started off with Imploder and worked my way round it for later use. I then loaded SoundStudio and loaded in one of the samples included called Bogey, which was a sample of Humphrey Bogart from one of his films which I don't particularly like.

The sample said "I stick my neck out for nobody", but when I got round to reversing the sample, I played it and it turned out to say something very rude.

This is one edition of any magazine that mildly shocked me. But don't worry I will be buying the magazine again (even more if this gets printed).

D Boyce, Leicester

I have omitted to publish what you thought Bogey said backwards, for obvious reasons!

Any reader with a curious disposition, a copy of any decent tracker and a very fertile imagination is welcome to try this experiment.

You might also like to try reading the entire magazine backwards – you can pick up the subliminal satanic messages much more easily that way!

➤

processes? So would it not be true to say that it only gives virtual multitasking through processor sharing?

Secondly, why did Commodore spend all that cash on developing the CDTV system, only to decide to also release a keyboard for it (soon) turning it into an Amiga, and release a CD-ROM drive for the Amiga turning it into a CDTV system?

Would the money not have been better spent on me (a poor student) or just on the development of a CD-ROM drive for the Amiga? Or a hardware ZX81 emulator? Or an easy way to fit an upgrade on an ST?

A lot of money to create two very similar things. Is that not quite silly?

Finally, I think capital punishment should be re-introduced for software thieves.

I Small, Edinburgh, Scotland.

The Amiga performs more than one task simultaneously – that is my definition of multitasking. Remember it also has a suite of custom processors to deal with anything from graphics, animation and sound to bus control. Paula, Agnes, Denese and Buster all do their bit to ease the 68000's load.

Commodore don't want people to see the CDTV as a computer. It doesn't have peripherals, it has "accessories" (I kid you not!).

The keyboard has become necessary in order to use things like database programs and reference works. There will still be a distinct line drawn between the CDTV and the Amiga.

Commodore consider the Amiga CD-ROM drive, the A690, to be a storage device, whereas the CDTV is a concept.

The A690 will be a major boost for the Amiga. Think of it, you will have all the power of the Amiga coupled with the storage capacity of CD-ROM. That combination is much more versatile than the CDTV.

As for being a poor student, I wouldn't have it any other way!

Gamer grumbles

As a 63-year-old GCI (Geriatric Computer Illiterate), I subscribe to two computer mags, and usually buy a third. I find that I probably understand about five per cent of what I read in these magazines, and yet they have been written and understood by a large body of the population.

This has formulated in my mind the theory that there is a parallel existence which interfaces with us lesser mortals about five per cent of the time. Does anybody else subscribe to this theory?

Now for the moans. This is another problem with being a GCI, you get irritated very easily!

One of the magazines to which I subscribe is, of course, *Amiga Computing*. The reason I decided to subscribe to this mag is because the games content seemed to be minimal.

Now what do you do? You put a great wad of games info in the mag in such a way that it is a pest when you're trying to read the rest of the mag, and you can't get rid of it unless you destroy the magazine. Renewal of subscription is under very serious consideration.

One last thing, are there any other like-minded GCI's in this area who would like to be together for mutual warmth and comfort?

J Perry, Potton Sandy, Bedfordshire

Good grief! *Gamer* was designed to make it easier for people to find (and ignore if they wish) our games coverage. We still have less games coverage than the bulk of Amiga magazines – quality rather than quantity is the operative. We could have removed games coverage completely, but that would deny the existence of the bulk of Amiga owners. Not a wise thing to do in our opinion!

Why not have a read of *Gamer*? Go on – you might like it!

Ezra online

Ezra Surf can be contacted on a whole host of bulletin boards and conferencing systems. If you have anything to say, get it off your chest online!

Amiga Computing also has its own Fidonet echo which is being carried by BBS systems throughout Europe. Any Fido sysops interested in hooking up should collect AMIGA_COMP off the backbone.

If you are experiencing difficulty, please contact Tony Miller, sysop of our home board – 01 for Amiga.

Additionally our mailman with the most, Ezra Surf, hangs out on the following services:

Service	Account number
Prestel	999800263
Telecom Gold	74:MIK911
CiX	amigacomputing
CompuServe	70007,4734
The Direct Connection	uad1132
01 for Amiga	Amiga Computing

Enchanted melody?

I couldn't help noticing that your October Tune of the Month, Toccata by one E Miller, bears more than a passing resemblance to a tune of the same name by my favourite Amiga musician, Alister Brimble. This can be found on 17 Bit's Supreme Sounds Vol 1 disk dated June 1989.

There are minor differences such as additional percussion sounds and a couple of tiny tweaks to the timing in places, but these are easy to do in MED. Alister's overall arrangement and instrumentation is left pretty well as written. Even most of the sounds are the same, even down to the dodgy looping in the opening chords (sorry Alister!).

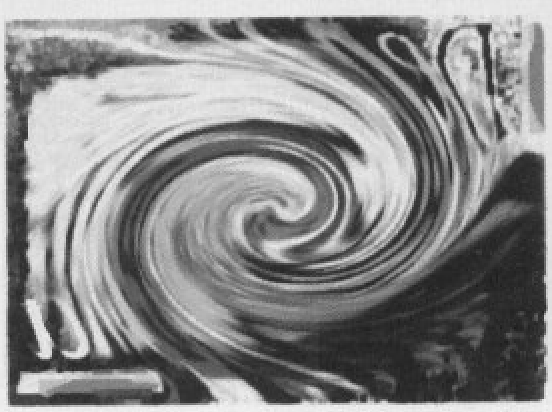
Alister wrote his version in SoundTracker, but again it is quite straightforward to convert a soundtracker tune to MED format.

Of course it could just be a huge coincidence, but if I'm right, then tut-tut E Miller! Check it out!

R Baxter, Manchester

Yours is one of several letters I have received pointing out the alleged origin of this musical masterpiece.

We included the tune on the disk in good faith.



CONTACTS

It's not what you know – it's who you know!

TECHNICAL PROBLEMS

We are happy to answer your technical problems in our ACAS section. Send your letters to **ACAS** at the address below

NEWSDESK

If you have a news story, send it to **John Butters** at the address below. If your story is URGENT call him on **0625 878888** during office hours

GALLERY

We are always on the look-out for good Amiga art. Send your work (as an IFF) to **Amiga Gallery** at the address below

EZRA SURF

Got something to tell other *Amiga Computing* readers? Send your general letters to **Ezra Surf's Postbag (ESP)** at the address below

COMPETITIONS

Enter competitions using the details on the form. If you have won a competition and not received a prize contact **Jonathan Maddock** on 0625 878888

PUBLIC DOMAIN SUBMISSIONS

PD libraries are welcome to submit their latest releases. Submissions should include a detailed list of what each disk contains. Jiffy bags to **Stevie Kennedy**

ALMANAC

Our Almanac authors can be contacted via *Amiga Computing*. Please mark any correspondence clearly and send it to the address below

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Technical enquiries about the Workstation should be sent IN WRITING to **Workstation Support** at the address below. Please return faulty disks to the supplier

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If you have a serious complaint about the editorial content of Amiga Computing please write to the **Editor-in-chief, Eddie McKendrick** at the address below

TELEPHONE CALLS

Except in the situations listed above we **cannot accept telephone enquiries.** Please write in to one of the departments listed in this panel

SAVE THOSE SAEs!

Please don't send us SAEs, we can't promise to reply to every letter so it really is a waste of your stamp. Sorry!

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GAMES

AIR WARRIOR This is a flight simulator program
ALL NEW STAR TREK Great game from Tobias Richter! (2)
ANTEP & SLOT CARS A graphical role playing game & a car game
ASSASSINS 1 Tanx, Rollerpede, Avatris, Caverunner & Amigoids,
ASSASSINS 2 Girl action, Missile command Invaders & 3 more!
ASSASSINS 3 Megaball & Drip! Superb breakout game & platform game
ASSASSINS 4 Jumper, Gomoku, Cracker, Jumpy, Turbo duel & Klondike!
ASSASSINS 5 Raid, Go Looly & Retaliator. 3 shoot em ups
ASSASSINS 6 Downhill challenge, Pacman 87, Meta Llamas & Weltrix
ASSASSINS 7 Destination Moonbase, Trix, Mightworks & Clauds runner
ASSASSINS 8 Air ace II, Hball, Number Fumbler & Snakepit!
ASSASSINS 9 Battle pong & Blizzard
ASSASSINS 10 Escape, Pipeline, Pickout & Sys!
ASSASSINS 11 Dad, Connex, Towers of Hanoi, Reversi & Trippin!
ASSASSINS 12 Llamatron, Car, Powerpong & X F 1!
ASSASSINS 13 Ball,Asteroids,Twinris,Block it,Squamble & Amigatration
ATIC ATAC A conversion of the old classic Spectrum game
BATTLEFORCE A strategy war game similar to Mechforce
BUCK ROGERS A nifty litle shootemup from the C-64 days !
ETERNAL ROME & DOMINOES 2 nice games on this disk
FLASHBIER Over 200 levels in this boulderdash type game
GALACTIC FOOD FIGHT Fight through ice cream cones fruit etc
GROWTH Brilliant game where you must shoot the brain!
JETMAN remember the old game jetpac ? Well here it is ! Mega!
KILLER CARS A great car game with filled vector graphics !
LARN Another very well regarded text adventure game
LEARN & PLAY Great fun for the kids on two disks (2)
LASERZONE Great old 64 classic shoot em up!
LEAPING LARRY Simple platform game done in Amos
MARBLE SLIDE Puzzle game, build slides up!
MASTER OF THE TOWN Shoot the signposts in this game
MENTAL IMAGE PACK 3 great games Gridrunner Invaders & Rebound
MORIA Text adventure based around Dungeons & Dragons theme!
NAPOLEONIC WAR SIMULATOR A nice strategy type game!
NESTOR CARD GAME Another card game, looks quite good!
NETHACK Dungeon & Dragon adventure style game, 2 DRIVES (2)
NO MANS LAND Hi tech war games shoot em up.
POM POM GUNNER Blast the enemy aircraft in this Beachead clone
RAPHAELS REVENGE A turtles game done in SEUCK!
RINGS OF ZON Interesting shareware adventure/strategy game
SEVEN TILES Superb futuresports speedball type game, Great!
SKATE TRIBE hang on to your skateboard! Nice graphics.
SEALANCE A submarine strategy game seems very involved
SERENE SHOOT UP Another good quality Shoot em up
SERENE II Follow up to the above game
SIMPSONS GAME Vertically scrolling shoot em up done in SEUCK!
SPLITTING Puzzle game, rearrange Ronald Reagans features!
STARFLEET Nice little game done in SEUCK!
STAR TREK The US version by Jim Barber, very good (2)
STAR TREK NEXT GENERATION Strategy game runs in Hires 1mg
STAR TREK THE SHOOT EM UP Yes a SEUCK version of game.
SUBCULTURE Playable 1st level of a good shoot em up!
SUPER TWINTRIS Superb 2 player tetris game! A500+ compatible!
SWIV DEMO Superb demo of an exelient shoot em up!
TRAIN CONSTRUCTION KIT make your own track layouts!
TRUCKIN ON A trading game based around truck haulage (2 disks)
TURRICAN 2 PREVIEW Great demo of superb shoot em up!
WATERMINES Nice boulderdash type game!

UTILITIES

AMICASH Brand new bank management program. very easy to use.
A-GENE Good geneology program, to trace your family name. 1meg.
A64 EMULATOR Commodore 64 emulator program + some basic listings!
ANIMATED POINTER PACK Disk full of animated pointers!
AMIBASE 3.76 One of the best Amiga databases. Search facilities
ANYLYTICALC Now unpacked and ready to use! (2 disk version)
ARP 1.3 Amigados replacement project, contains new libraries & more !
AB LABEL PRINTERS All the best label printing programs on 1 disk
ASSASINS GRAFFIX UTILS Great disk full of graphics convertors etc.
BANKIN A complete cheque book analysis program. Keep tabs on cash
BIORYTHMS & STARCHART Check your Biorythms & examine the night sky!
BUSINESS CARD MAKER Make your own with this useful utility.
C MANUAL II (4) New and better ! Version 2 now comes on 4 disks !
C-LIGHT RAY TRACER A commercial ray tracing package. Now PD !!!!
CLERK Another program similar to Journal, manages your bank account.
CLIPART 8 disks crammed full of some of the best clipart around!
D-COPY One of the best PD copy utilities available, very easy to use.
DEMOLISHER UTILITIES 168 easy to use utilities, something for everyone
DESKBENCH Nice alternative workbench,Icons + bases (3)
DESKTOP PUBLISHER From Germany, English translation now available.
DISKMASTER 3.0 CLI Utility program, copy files, delete, format disks.
DYNAMITE FONT II Another popular disk. Stacks of IFF fontscreens.
DYNAMITE FONTS Exellent fonts disk for use in Dpaint etc
EDUCATION SET (5) Five disks full of educational programs. good
ELECTROCAD PREVIEW If your'e into circuit diagrams etc, try this.
FABLE FONTS More of theses superb fontscreens. For use with DPaint
FLEXIBASE DATABASE A simple to use database for the beginner.
FONTS AND RAM MANAGER Lots of fonts plus a software ram switch !
FONTS & SURFACES Lots of useful fonts brushes etc for use in Dpaint!
FRANZ MEGAUTILS DISK Plenty of Font Eds and a good boot menu program
GENESIS DEMO Superb fractal generator, really good!
GRAPHICS UTILITIES Load of useful graphically orientated programs.
HAMLAB Convert VGA PC pictures to Amiga ham mode with this utility.
HARDDRIVE UTILS Some good utilities for hard drive owners.
ICONMANIA Loads of programs for icon creation & many icons!
ICONS This disk is just crammed with useful & varied icons.
IMPLODER V4.0 Very good crunching program, very efficient!
INTERFERON PRO Create protection bootblocks against viruses.
JAZZBENCH A great alternative workbench much preferred by many!
JOURNAL A nice program designed to keep track on your finances.
JR COMM 1.02 Latest version of another superb comms package!
KEFRENS METALLION UTILITIES Great util disk full of fonts & more!
KING JAMES BIBLE Old testament & New testament & text reader (4)
LANGUAGES DISK All you ever needed ! Forth, Module 2, X-Lisp and Logo
MCAD Computer aided design package uses hi res mode. Good. 1 Meg.
MACVIEW,DRAW,ROTATE Collection of three unusual programs. Interesting.
MESSY-SID Easy to use PC - Amiga file transfer program, Brilliant
MISCELLANEOUS BUSINESS PROGRAMS Geotime, Grocery list, Calculator
NCOMM v1.92 Latest and best version of this exellent comms package!
NORTH C 1.3 (2) A two disk unpacked version of above program. !
PASCAL COMPILER Now becoming a popular language, now available on PD
PC EMULATOR Software PC emulator needs MS DOS to run! CGA graphics!
PRINDLE EUROPA MEGAUTILITIES 1 An essential collection of over 200 !
PRINTER DRIVER GENERATOR Design your own printer driver with this.
PRINT STUDIO V1.25 Great utility for accurate printout of pics,text.
QBASE Database program, simple to use with full search facility.
QED A nice easy to use text editor program ! Load, save, print.
QUICKBASE A small database program, also Xspell & Text editor on disk.
QUICKBENCH Another alternative workbench system, very clever this one!
RAZOR 1911 Graphics rippers, Virus killers, Disksalv. powerpacker ..
RIM DATABASE Very comprehensive relational database system. Powerful.
SCULPT A simple 3D drawing package for your Amiga. Very popular.
SCOPE 114 Structured clipart for deskop publishing etc! Ppage etc!
SCOPE 115 Structured clipart for use in Professional page ETC.
SID V1.5 Newest version of the easy to use CLI utility. Essential !
SOMETHING FOR NOTHING 2 disk set full of video utils, fonts etc. (2)
SOZOBAN C Another very popular C envioroment, similar to North C
ST EMULATOR Run Atari ST software on your Amiga. Needs 2 drives.
SUPER 'C' DISK As near to a hard drive as mere mortals get!

PU117 SUPERKILLERS Kills 172 viruses, more than Master Virus2.2. A must!
PU118 SUPER WORKBENCH Yet another alternative workbench disk!
PU119 TAROT An astrology program for your Amiga.
PU120 TEXTPLUS V3.00 One of the best wordprocessors, includes Amigaspell.
PU121/2 TV GRAPHICS Superb Dpaint backdrops and some great fonts. (2)
PU123 UEDIT LATEST RELEASE Word processing shareware program.
PU124 ULTIMATE ICON DISK Contains Iconmeister, Iconlab, Iconmaster & icons!
PU125 ULTRAPAINT v3 A nice paint package for IFF pictures!
PU128 VECTOR DESIGNER A very comprehensive but difficult to use proggy.
PU129/30 VIDEO APPLICATIONS (2) Programs for use with genlocks & videos!
PU131 VISICALC SPREADSHEET Simple to use spreadsheet program based on VC.
PU132/3 WINDOWSBENCH A Windows 3/Workbench2 lookalike, very nice. (2 disks)
PU135 WORDWRITE WORDPROCESSOR Comprehensive wordprcessor with spellchecker.
PU136 ZX SPECTRUM EMULATOR Latest version now with sound too !
PU137 600 BUSINESS LETTERS contracts, letters, alsorts included !

ANIMATIONS

PA002 AGATRON 2 Misc - jet fighter landing , basic
PA003 AGATRON 3 Star Trek - Shuttle fly past 1m
PA004 AGATRON 5 Star Trek Klingon fires torpedoes 1m
PA005 AGATRON 7 Star Wars Fighter doing loops etc 1m
PA006 AGATRON 9 Star Wars - Fighter fly by, impressive 1m
PA007 AGATRON 10 Star Trek - Enterprise in dry dock Good 1M
PA010 AGATRON 13 Misc - Robo 1 A robot waving 1m
PA011 AGATRON 14 Star Trek Workbee & Reliant. 3 shots
PA012 AGATRON 15 Lotus car, Billiards, & Jet Fighter animations!
PA015 AGATRON 20 Huey 2 A helicopter leaving a landing pad. Neat. 1 Meg
PA016 AGATRON 23 Star Trek fleet manoevre 1m
PA017 AGATRON 24 Kull pen animation & Ping pong. Great! 1m
PA018 AGATRON 25 The run , a suberb car chase 1mg or over. 1m
PA019 AGATRON 26 A ship rocking at sea, / enterprise leaves dock. 1m
PA020 AGATRON 30 Contains Hyperspace animation & Landing animation 1m
PA021 AGATRON 31 Anim of a Porche rising out of a table 1 mg.
PA022 AGATRON 32 Space - Space probe flying away 1m
PA023 AGATRON 33 Probe animation Bird of prey animation & Klingonhit! 1m
PA025 AGATRON 35 Space- space probe flying away 1m
PA026 AGATRON 36 Star trek Bird of prey, loop the loop. 1m
PA027 AGATRON 37 Misc - Tobias goes knackers! 1m
PA028 AGATRON ANIMS 5 great short looped animations!
PA032 BONGO ANIMATION Animation of a man playing the bongo drums.
PA033 BUSY BEE Cute animation of a freaky bee. almost looks wooden. 1 Meg
PA036 CX1 SPACESHIP A beautiful sculpt 4D anim of a ship circling a globe.1M
PA039 ERIC-S AMY VS WALKER Cute and sexy(?) squirrel chasing a Walker.1.5M
PA040 ERIC-S BATMAN A great animation featuring batman and the joker. 1 Meg
PA041 ERIC-S COTOTE 2 This ones a corker,coyote up to this tricks 1.5 Meg
PA042 ERIC-S COYOTE STRIKES BACK Not too good this time but still popular.1M
PA043 ERIC-S MORE AEROTOONS More humourous cartoon capers. Great stuff.1M
PA044 ERIC-S SHUTTLECOCK Two Space Shuttles playing with a satellite. 1 Meg
PA045 ERIC-S STEALTHY II The Mig-29 and Stealthy bomber cartoon. Great.1M
PA049 HAPPY ANIMATIONS HappyMan, TreeFrog, Windowman and Hammer. All 51
PA052a/52b LAUREL AND HARDY Brazzel Atkins, select different clips.1M
PA053/4 LIGHT CYCLES (2) Huge animation from the Tron film. Excellent. 1 Meg
PA056 MAGICIAN II this ones a bit better, more glossier this time round. 1M
PA065/68 REAL 3D (4) Superb demo of the effects possible with Real 3D. 1 Meg
PA069 REAL THING HORSES demo of the animation package for deluxe paint.
PA070 SHUTTLECOCK ANIMATION 2 shuttles playing with a satellite!
PA072 THE JUGGLER the old classic animation that sold hundreds of Amiga's !
PA073 THE KNIGHT DEMO Animation of a knight climbing out of a book. 1M
PA074 THE WALKER DEMO Helicopter attacking the walker. Film style. 1M
PA075 THE WALKER DEMO II Walker Attacking the A2000. Not bad. 1 Meg
PA076 UGLY MUG ANIMATION The ugly mug goes for a spin!
PA077 UNICYCLE ANIMATION Exellent animation of a unicycle & a car!
PA078 WINGS Superb quality red baron biplane animation. Very nice indeed.1M
PA079 ZEUS BUST ANIMATION Animation of a golden bust rotating!
PP001/2 ANTI LEMMINGS (2) Absolutley brilliant animation ! Get this now !2M
PP003 AT THE MOVIES Cute anim from Eric Schwartz featuring Amy squirrel 1.5M
PP004/7 AUTOMATED LIGHT (4) Great battlestar galactica type animation. 3 Meg
PP008/10 BUZZED (3) Great animation of a wasp crashing into things. 3 Meg
PP011/12 DATING GAME (2) Superb new demo from Eric Schwartz, Get it. 3.5mg!
PP013/15 DRAGONS LAIR (3) Three meg power demo with sound effects. Great !
PP016 GULF WAR ANIM Find out what happens to Hussein! Brillant 2mg!
PP017 JUGGLER II Juggler meets Ms.Juggler. Great followup 1.5Meg
PP018/20 LOST IN SPACE (3) Remember the old TV series ? This is it ! 2 Meg
PP021/24 LANDING (4) Tobias Richter Poweranim ! Superb ray traced stuff. 4Mg
PP025/27 STATION AT KHARN (3) Animation of a a spacestation,nicely done. 2M
PP028/33 UPGRADE (6) Wow ! Camberwick Green meets the Amiga ! GREAT ! 5 Meg
PP034/35 VAUX KILLERS (2) An old but quite good 2mg demo 2mg.
PP036/37 WALKER DEMO (2) The 2 disk 2mg version of this classic demo.
PP038/39 WAVE SAILING (2) A nice animation of a wave sailer! 1.5mg

DEMOS

PD001 AGONY DEMO Brilliant graphics in this game demo,show it to ST owners.
PD005 AMOS 3D DEMO Shows you some of the effects that are possible with 3d
PD007 ANARCHY INSPIRATION IS NONE Brilliant demo with some superb ray trace
PD008 ANARCHY MADNESS II Demo with Bobs and Filled Vectors, superb music!.
PD009 ANARCHY SYSTEM VIOLATION Classy demo featuring Vector Bob Gfx Cool !
PD010 ANARCHY DIGITAL INNOVATION Their latest and best demo, superb!
PD011 ANIMATORS MEGADEMO A nice new megademo from the Animators.
PD016 BUDBRAIN II Hilarious megademo, house music video and cartoon sketches
PD019 COOL FRIDGE A plasma meagdemo, if you like these FX get this one.
PD020 CRIONICS MEGADEMO Includes the superb maddona demo and more !
PD021 CRIONICS NEVERWHERE Superb demo with a Real world demo and Madonne
PD022 CRIONICS TOTAL DESTRUCION Very nice plasma Fx plus a kickin music !
PD027 CRYPTOBURNERS HUNT FOR RED OCTOBER Lovely filled vector demo. Great!
PD031 DEFJAM PIXEL NATIONS Nice multipart demo with plasma,bobs etc.
PD032 DEVILS LABYRINTH Great new demo with some fab effects, RGB ham plasma!
PD033 DEVILS NO REALITY Another great multipart demo from Devils!
PD035 ELVIRA DEMO An exellent demo of a very good game!
PD036 E P I C Incredible preview to a new game by Ocean, Filled vectors. 1M
PD041 FRAXION FUTURE VISIONS Superb Aliens-type intro plus great pictures
PD042 GOLDFIRE OBLIQUE INFINITY Nice megademo with an acid style video !
PD043 GOLDFIRE ULTIMATE FX Another good megademo from Goldfire.
PD044 HORIZEN SLEEPING BAG Great multipart demo with vectors & funky music.
PD046 IRAQ DEMO Amusing demo of Saddam meeting President Bush .... Kaboom!
PD049/50 KEFRENS MEGADEMO VIII Loads of filled vectors and brill music.(2)
PD051/52 KGB MEGADEMO (2) A great house music video & vector drummers.
PD053/54 LAUREL & HARDY Good demo featuring 'The lonesome pine' song. (2)
PD055 MAGNETIC FIELDS HYSTERESIS Excellent vector graphics, plus music !
PD056/57 MAGNETIC FIELDS SPACED OUT (2) demo disk with great music tracks
PD066 PHENOMENA ECES A very good demo with a light sourced filled vector !!
PD067 PHENOMENA INTERSPACE Is time Linear ? Well get this demo and find out
PD068 PHENOMENA ENIGMA Absolutely brilliant, one of the all time greats!
PD069 PHENOMENA JOYRIDE Another absolute corker of a demo!
PD070/75 PINK FLOYD THE WALL (6) Oh yeah ! A huge demo based on film !
PD076 PLASMUTEX Kickin SoulIISoul music beats plus wild copper and plasma !
PD077 PMC ALPHA OMEGA An absolutely superb filled vector demo. Lovely music!
PD078 PUGGS IN SPACE A classic demo, the kids will love it.
PD079 PRISONER DEMO Remember the old 60s series? Well heres the Amiga demo
PD080 PULLING THE TRIGGER Well laid out set of demos.
PD082 QUARTEX SUBSTANCE Superb demo one of those you simply must have !
PD083/4 RAF MEGADEMO A very nice 2 disk megademo! (2)
PD086 REBELS COMA This one is a classic ! the best Acid style video on Amiga
PD087 REBELS SNAP A nice demo with spooky style music track, Popular still.
PD088 REBELS TRIPLE TROUBLE Nice new demo, + some others.
PD093 SCOOPEX CHROMIUM Superb demo with great graphics and music.
PD094 SCOOPEX MENTAL HANGOVER One of the best demos of all time. get it!
PD096 SHINING VECTOR EXTERMINATOR Exellent demo, incredible new effects.
PD097 SILENTS GLOBAL TRASH This is a MUST for all demo freaks, Mega !!!!
PD098 SILENTS ICE Latest demo from the Silents. Brilliant music tracks !
PD099 SILENTS MEGADEMO Old but still up to scratch, vectors and music !
PD100 SIMPSONS BY DECAY With superb animation and a great funky music beat
PD101 SIMPSONS EQUINOX Remix of the song & pics of our favorite hero Bart !
PD102 SIMPSONS FREEHAND Slideshow with funky Bart Simpson music
PD103/4 ST PEPPERS LONELY HEARTS Great 60s syle demo from Brazzle (2)
PD106 TECHNOFRIGHT A spooky demo with good music & effects!
PD109 TOMSOFT VIRTUAL WORLDS An absolute Epic ! Best demo of the year !!!!
PD110 TRIPLE TROUBLE Brilliant plasma and copper fx with funky music track !
PD111 UNREAL DEMO Superb graphics & sound in this great demo.
PD112 UNIVERSAL PICTURES Very impressive filled vector demo in space
PD113 VANGELIS DEMO Great music & superb colour cycled graphics. 1mg.
PD116 WITH VECTORS TO HEAVEN New demo just in, check it out!
PD119 REBELS OUTLAND Latest demo from a prolific outfit! Excellent

MUSIC

PM001 100 GREATEST 64 TUNES Over 100 classic 64 tunes imortalised !
PM004 ALCATRAZ 'THE POWER' Excellent re-mix of the song by the band Snap.
PM006 ALCATRAZ SOUNDS OF ENERGY Four Great house music tracks. GET IT
PM007/8/9 AMAZING TUNES II (3) This ones a biggy loads of great music !
PM010 AMEGA PARTY WINNERS Four EXCELLENT songs that won the Amega party !
PM012 AMIGADEUS CLASSICAL Superb renditions of Eine Kleiner etc.
PM013 ANARCHY CAPTURED IMAGINATION SOme very nicely presented music by 4-Mat
PM014 BANGING RAVES Yeah ! Pump up the music, kickin remix of some house
PM015 BEAST SONIX Scoopex present the music from Beast I, all tunes.
PM017 BEATMASTER 808 STATE Cubik and more of this type of music
PM020/21 BRUNOS MUSIC BOX III Some superb jazzfunk music on this 2 disk set
PM022 CLASSICAL MUSIC Great music of Bach, Handel etc from Rob Baxter.
PM024 CRUSADERS BACTERIA Great music disk one of the best ever!
PM028/29 D-MOB MUSIC 4 (2) PopMusic, PumpUpTheJam and more great house !
PM030 DIGITAL CONCERT 2 Thirteen minutes of music, Doctor in the house
PM031 DIGITAL CONCERT 3 Another house music re-mix Great quality - Love it !
PM032 DIGITAL CONCERT 4 Four songs including Got to keep on - Brilliant !!!!
PM033 DIGITAL CONCERT 5 The Power, Kaos, Keep Bustin, and Touch Me. Brill!
PM034 DIGITAL CONCERT 6 Latest in the series, very good quality House music
PM035 DIGITAL DEBUSSY Great classical music from Rob Baxter, Clair de lune
PM036 DIGITAL DEBUSSY 2 More great Debussy tracks on this 2nd disk.
PM041 EQUAMANIA II Demo with a great dance music track and fab equalizers !
PM042/43 EVIL FORCES Brand new mega acid/house demo (some swearing!)(2)
PM047/48 GOLDFIRE CEREBRAL DELIGHTS (2) Two disks of music with tape select
PM050 JARRE DOCKLANDS The keyboard wizard, sampled and on your amiga. Great!
PM051 JUSTIFY MY LOVE Remix of Madonna song plus more mixed in!
PM052 KEFRENS JUKEBOX This ones super ! Lovely music with a Juke box !
PM053 LSD DONT PANIC Superb new music disk, exellent quality music.
PM054/57 MADONNA VOGUE (4) Sampled remix of the song, good quality sample !
PM059 MANIACS OF NOISE This is brilliant ! Great stevie wonder type music !
PM061 NEWTRONS MUSIC BOX Headbanger demo ! Beats in time to the music !
PM065 PHENOMENA MUSIC DREAMS I Twenty wicked songs by twins of Phenomena.
PM066 PHENOMENA MUSIC DREAMS II Second in the series More superb music !
PM069 RAZOR FACE ANOTHER DAY This is an incredible music track!
PM070 RHAPSODY IN BLUE Great conversion of Gershwin music by Rob Baxter! 1M
PM071/72 SILENTS BLUES HOUSE (2) Tangerine Dream style music. With game !
PM073 SILENTS FULL POWER House it up music. Includes Remix of tricky disco.
PM074 SOUND OF SILENTS This is a must ! Great atmospheric Jesper Kyd music!
PM078 TECHNOTRONIC REMIXES Pump Up the Jam and Get Up - they even sing it !
PM079 TECHNOTRONIX REMIX All of their songs remixed into one great track !
PM080 THE SOUNDS OF GNOME Mahoney and Kaktus music disk. 46 great tunes.
PM081 TIMECIRCLE MUSIC More Commodore 64 style music. Very good
PM082a/82b VIVALDI - FOUR SEASONS (2) Superb rendition by Rob Baxter
PM087/88 HIS MASTERS NOISE Mega new music disk by Mahoney and kaktus ! (2)

SLIDESHOWS

PS002 ADVANCE HAM A collection of brilliant digitised pictures with music
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PS004 AGATRON 6 Incredible 4096 color ray traced slideshow. Get this one !
PS005 AGATRON 8 Excellent HAM pictures, with some good music too. Mega !
PS006 AGATRON 9 More of Richters superb works, again based on Star trek.
PS007 AGATRON 12 Some more great pictures on this new disk.
PS009 ASTRONOMY SLIDE Nice pics of constellations, galaxies nebulae etc!
PS011/12 BORIS VAJELIO (2) Pictures digitised from works by the Artist.
PS017 CHAINSAW SLIPPERS This one is Great, the pictures are naff but Mad!
PS022 DEBBY HARRY SLIDESHOW Some nice pictures of 70s popstar (2 disks)
PS023 DEMONS III A quality slideshow from C-Dryk of Demons, with music
PS025/26 DIVINE VISIONS (2) A slideshow of Mythylogical gods with music
PS029 FORBIDDEN PLANET Nice slide with story text of cult 50s Sci fi (2)
PS032 GENOCIDE great fantasy slide with unusual fades & wipes & soundtrack.
PS033 GERMAN RAY TRACE High quality ray traced pictures by a german artist.
PS034 GRUSEL SLIDE Eerie fantasy slide from Germany, unusual.
PS036 HEROIC DREAMS SLIDESHOW 1 Great fantasy art pics from Pendle Europa.
PS037 HEROIC DREAMS SLIDESHOW 2 More great fantasy art pictures
PS038 HEROIC DREAMS SLIDESHOW 3 And yet more great fantasy pictures.
PS041/42 JIMI HENDRIX SLIDESHOW Great picshow of the 60s rock legend! (2)
PS046 KIM WILDE SLIDESHOW Lots of pics but mainly in black & white.
PS047/48 MADONNA SLIDESHOW Lots of pictures but needs 1 mg & 2 drives (2)
PS049/50 MADONNA DICK TRACY SLIDE Quite nice slideshow, (2)
PS055 NASA SLIDES 2 More pictures, this time viewed from space. good !
PS056 NEWTEK DYNAMIC HAM A slideshow of Newteks new mode 640x512 4096 colors
PS057 NEXT PIXILIUM Very nice pictures all done in Dpaint plus some music.
PS059/60 NIGHTMARE ON ELM STREET SLIDESHOW great for all you freddy fans (2
PS061 NIK WILLIAMS Some very well digitised pictures from the pictureware.
PS062 NW DYNAMIC HAM More from the Nik Williams series. Incredible quality.
PS069/70 SILENTS/CH 42 (2) This is superb, slides plus a great music track.
PS072 SUPER HAM CARS Superbly digitised slideshow in Interlaced HAM. Mega!
PS074a/74b THE FABULOUS ART OF TOBIAS RICHTER Brilliant art by Richter
PS075 TOTAL RECALL Music and pictures from the Arnie's Sci fi film. Great !
PS076/77 TERMINATOR II SLIDE Great slide of a great film! (2)
PS081 WATERSHIP DOWN Cute side of those rabbits, great for the kids.
PS082/83 WRESTLE MANIA (2) Collection of picture and animations. Good !
PS084 WWF WRESTLERS Pictures of Hulk Hogan and the rest of 'Em. Great !

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All titles are £3.50 Each. These disks are not public domain. Most Titles are 1 Meg. All DeJa Vu software is A500 Plus compatible.

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LPD17 DOGFIGHT II Up to an 8 player shootemup game. Great!
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LPD33 CREATIVE ADVENTURE TOOLKIT Produce stand alone adventures
LPD34 INVOICE PRINTER Quick production of invoices on paper
LPD35 T-TECDRAW Technical drawing program with print facilities
LPD36 FRACGEN II Great fractal program generator
LPD37 ROCKET MATHS Help children in maths with this game
LPD38 AMOS ART Contains lots of fonts,bobs,sprites & scenery blocks
LPD39 MAGIC FOREST II Great sideways scrolling platform game
LPD40 SPRITE BANK EDITOR Makes sprites really easy to use
LPD41 RESCUE A 3D adventure game done with 3D construction set
LPD42 X-STITCH Print out pics for embroidering, with documents
LPD43 LAZERZONE A very nice shoot em up game.
LPD44 FORMULA ONE CHALLENGE Nice road racing game.
LPD45 MUSIC BOX A music program for children of 7 upwards.
LPD47 DIRTY CASH An exellent fruit machine program.
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LPD49 MARVIN THE MARTIAN A maze type game, collect keys etc!
LPD51 MAGICAL YOUNG ARTIST Contains 30 stencils to colour in!
LPD52 LC24/200 FONTS Same as LPD22 but for 24 pin printers!
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Looking for something to spend those last few Christmas pounds on? Daniel Whitehead sorts out some PD bargains...

SHAREWARE AND PUBLIC DOMAIN SHOPPER Selection

With Christmas now receding into a blur of cheap tinsel and even cheaper sherry, the PD companies have been bombarding us with games. For those who loathe to look at games there are some rather interesting utilities and such like, but for those who want to mop up the last of their hard-earned cash on some post festive zapping, then this one's for you...

Neptune Slideshow

AmigaNuts Disk No 1179

After last month's scintillating Mars Slideshow, this month's digitised offering comes from Amiganuts as a two disk set. Yet more digitised pictures of another planet for you to load up and, er, look at.

The quality ranges from crystal clear on some of the close-up shots to fairly indistinct for some shots of the whole planet. The real problem is that Neptune isn't very exciting. With Mars at least you've got all the rumours and mystery of the Planet of War – Neptune just doesn't have much "oomph". This slideshow doesn't even have the informative text overlays of the Mars slideshow.

A bit of a pointless exercise, really. Worth a look if you want to see what can be achieved with a digitiser, but not really different enough to make it worth getting.

Down Hill Challenge

Strictly PD Disk No G342

First mention of the month goes to this wonderfully nostalgic skiing game. Those who graduated to the Amiga from the humble Spectrum will instantly recognise that cobwebby fave, Horace Goes Skiing. The graphics are different, and the crossing the road section has gone, but the exhilaration of rushing down a pixelated slope and dodging trees at high speed is still there.

There are a few minor problems, such as the way the game is simply over once you've completed the course.

The randomly generated trees and rocks make it different each time you play, and the bonus flags and extra points for leaping over branches add excitement to the battle for a high score.

The longer you stay on your skis the more points you earn, the faster you go and the harder things get. Hit an obstacle and you fall flat on your face and lose one of your five lives.

It's everything that a PD game should be. Simple, well thought out and outrageously addictive. Not the sort of thing that'll keep you glued to the joystick for hours on end, but it's the sort of game that you just want to load up for a quick go in between more serious matters. A pleasant diversion. And isn't that what PD games are about? Playability and good fun for next to nought pence. Great, undemanding stuff.



The swish of the snow, the wind in your hair and the trees in your teeth. It's a man's life as a downhill skier!

The Invisible World

Strictly PD Disk No D462

Another digitised slideshow, but one that's a lot more interesting, especially for the more macabre among you. It's made up of three sections, each one highlighting one aspect of the things we cannot see with the naked eye.

The first section shows, in unflinching detail, all the little bugs and beasties who live in, on and around us. Each picture is accompanied by some suitably skin-crawling text to let us know exactly what these little beggars do to us. Many a shiver passed through the office at the sight of a bed bug magnified 300 times. Not for the squeamish.

The second section focuses on those clever stop motion films, and includes shots of bananas being shot, with the picture held at the exact point of impact and the skin of a balloon peeling back in under a millionth of a second as it is burst. Amazing stuff. Again, text accompanies each picture giving information on what it is and, more interestingly, how it was achieved.

The final section reveals what tiny, everyday objects look like when magnified. A crack in an egg becomes a giant crevasse and a pinch of salt looks like a demolished building. The text continues to describe the awesome sights, and you'll be hard pushed to believe it sometimes! Surely that horrendous mass of squirming spaghetti can't really be plaque on a tooth?

The quality of the black and white pictures is very high, so no detail can be missed. Each section is as interesting and eye opening as the last and is guaranteed to have everyone gasping and muttering "Well I never...". Compelling stuff, and definitely worth keeping your eyes open for, if you can stomach the thought of all those little monsters swimming around in your armpits.



Not while I'm eating, Mother! The squirm-worthy world of long-legged beasties revealed for you!

The Final Frontier

Strictly PD Disk No U314

Here's a treat for all you Trekkies out there. The Final Frontier is a disk magazine dealing exclusively with Star Trek trivia and info. Lively Trek debates rage in the letters section. Is Wil Weaton rubbish? Is The Next Generation a pile of old klingons? You can air your views here, and also get gripes about dodgy ➤

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913 WHEEL OF FORTUNE
914 JEOPARD, RISK TYPE GAME
915 MISSILE COMMAND
916 AMEOBA INVADERS
917 ROLLERPEDE, INVADERS
918 CUBULUS, FAB PUZZLE
919 ZEUS
920 HOLLYWOOD TRIVIA
921 FLASHBIER, NEAT 200 LEVELS
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TOP GAMES

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837 MADONNA ANIM, CRIONICS.......1 Meg
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merchandise and life in general off your chest.

The whole thing is very well presented, featuring several Tobias Richter pictures inspired by the series. It's fairly obvious that this won't appeal to the "normal" people out there, but for all you Trekkies, it'll go down a treat.



Public domain. The final frontier. These are the continuing voyages of the clichéd captions...

Games Compilation 1

Warpdrive Disk No 0511

A fairly new PD library are Warpdrive, having only been around since June. In a blatant bid for free publicity, they've sent us a preview of their first games compilation. And just look at the quality of these games...

You get four games on the disk – Bip, Wizzy's Quest, Sys, and (ahem) Skoda Challenge. Bip is a revamped version of some old arcade machine that no-one can remember the name of, Wizzy's Quest is a puzzle game in the vein of Spherical, Sys is really Pengo in disguise, and Skoda Challenge is, er, well it speaks for itself, really.

Of the four, Bip is by far the most fun. It's a two player affair where you each take control of a little biplane and zip about the skies trying to shoot each other down. The catch is that the planes handle in a strange way. Pushing forward on the joystick speeds you up and then right and left rotate the plane. Fire, as if by magic, fires your machine gun.

The planes have to obey the laws of physics though, and if you try to many intricate twists and turns then your engine cuts out and you tumble to the ground. The first player to crash or get shot fifteen times loses. It's a simple concept, but it's beautifully programmed and once you've got the hang of the controls, you can have hours of fun looping the loop and dive-bombing your mates.



Barn-storming action and wildly flapping silk scarves for spiffy biplane pilots

Wizzy's Quest is a German puzzle game, with all the text translated with a wicked sense of humour. All you have to do is guide some ancient wizard bloke out of each level by building blocks to climb up and over obstacles. You get 50 levels so there's no risk of it being too easy. The control is a bit sticky, but this doesn't matter too much as fast reactions aren't that important. It's not brilliant, but it's good for a laugh.

Sys is another puzzly type of game, based on Pengo. You control a little round bloke who shuffles round a maze of disks and must destroy the viruses by shunting said disks on top of them. It's been done before, and done better, but as part of a four pack, it's a mildly entertaining way to spend a few minutes. And finally

➤

Nucleus

Amiganuts Disk No N

A cut above the usual PD shoot-'em-ups, as there isn't a trace of the stereotypical SEUCK vertical plodding "thrills". Instead we get a very slickly presented horizontal scroller, with highly posh graphics and a professional tune. It all looks very smart indeed.

It plays OK as well. It's a bit slow, and some of the aliens can take a few too many hits to kill, but the polished feel makes it last that little bit longer than most PD shooteramas. If I've got one criticism of Nucleus, it's that it becomes much too hard with no warning.

You spend the first level happily blasting the mindless aliens, and then come face to face with a monstrous end-of-level baddie who launches a barrage of heat-seeking missiles at you and kills you stone dead.

This rather unfair surprise does affect the game's long term appeal as, personally, I can't see anyone wanting to boot this up only to remain on the first level for ages. Maybe you can develop some skilful tactics to defeat the beast, but you may find yourself inclined to give up.

A pity really, as this silly design spoils an otherwise excellent game. So, as Dennis Norden would say, if you're one of those people who can complete all the games in the top forty blindfolded, then Nucleus is probably just the game to bring you down a peg or two. You smug little things.

Amiganuts update!

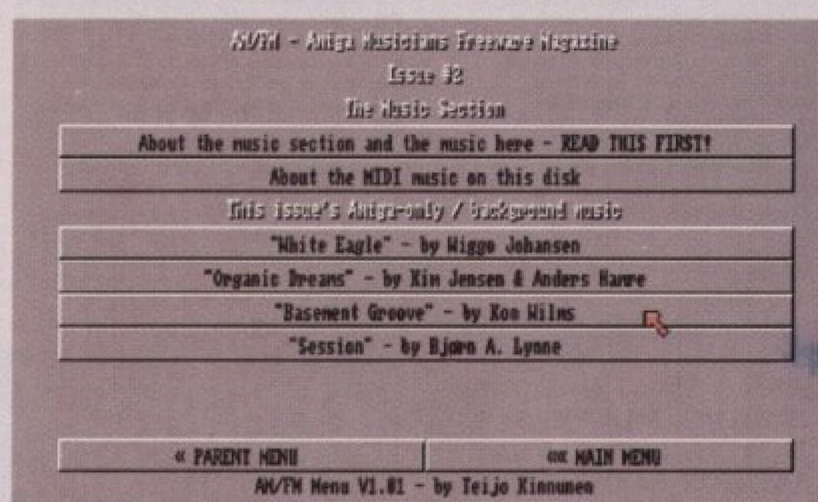
Amiganuts have asked us to make a few statements on their behalf to the PD buying public. First of all, those Amiga nutters would like to make it known that as of now all their disks are fully compatible with the A500 Plus.

They're also proud to announce the latest developments in the wacky and wild world of OctaMED. They are now able to offer a full OctaMED manual, to help you squeeze the best results from Teijo's musical masterpiece.

The manual comes all professionally bound up, like the worksheets you got in school that always smelled of Bostik. Fortunately, this manual doesn't smell even remotely Bostik-like, but it does contain 90 pages of hints, tips and instructions for everyone's favourite PD program.

It's very well laid out, and looks quite daunting to the unconverted, but if you're conversant with the program then this'll sort out any queries you might have. It's nice to see PD libraries becoming more professional in their marketing, isn't it?

Also available from those huggable Amiganuts is a disk magazine, going by the uncanny title of AM/FM. It's described as "a magazine-cum-utilities disk that is aimed strictly for the musical Amiga user". Sounds like your cup of tea? Then get in touch with the 'Nuts and get yourself a copy.



For the musically minded, AM/FM will keep you up to date with all the Amiga music news

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UTILITIES

U07 – **Dcopy** *V1.6* – Brilliant backup utility
U10 – **Jazzbench** – Greatly enhanced WB
U15 – **RSI Intro Maker** – *With docs by HIM!*
U17 – **Razor Tools** – Excellent disk
U20 – **Master Virus Killer** *V2.1* – V.Good
U25 – **Fonts & Surfaces** – Cut and Paste
U32 – **C-Light** – Lapsed commercial Tracer
U33 – **M-CAD** – Computer Aided Design pack
U35/6/7 – **Darkstar Utils** – Nos 2 to 4
U38 – **Assassins Boot Utilities** – Excellent
U42 – **SID** *V1.06* – The *only* directory util?
U43/4 – **Catalogue Workshop** – Rather good
U45 – **52 Clip It!** – Was once *20* disks!!
U53 – **COMMS** – Good but a little dated
U54 – **Hard Disk Utils** – Wouldn't be without
U56 – **TSB Vector Designer** – For RSI fans
U57 – **Messysid** *II* – Ultimate in transferers
U58 – **PCeMulator** – An exceptional tool
U61 – **Intercostal Utils** – Brilliant disk
U62 – **Quickbench** *V1.1* – Bootable RRAD
U64 – **Brilliant Boot Utils** – Hi Roy!
U69 – **Alpha Flight Demo Creator** – Old!!
U70 – **Darkstar Utils 5** – Yet another!
U71 – **Spacewriter** – Lovely intro writer
U83 – **Sculpt 3D Scenes** – For Sculpt owners
U85 – **ESA Utils 1** – Brilliant disk
U86 – **Full Force Utils 2** – Seventy Utilities
U87/8 – **Graphics Management**
U90 – **Geneology database** – Needs 1 meg
U93 – **Spectra paint** *V3.2* – Brilliant rival
U94 – **Opti Utils 1** – Excellent quality
U97 – **North C** – Famous C compiler *V1.3*
U98 – **104 High Quality Clip Art**
U112/3/4 – **C Manual** – A little *light* reading
U118 – **Pendle Europa Utils 7** – Excellent
U119 – **Diskmaster** *V3.2* – Directory Utility
U121 – **Spectrum Emulator** – Rather good
U129 – **Pascal Compiler** – Very popular
U131 – **Assassins Multivision** – GFX tools
U136 – **Electrocad** *V1.4* – Latest version!
U143 – **SuperKillers** – **BOOTX** *V4.04*
U144 – **HamLab** – Iff conversion prog
U145 – **Total Utils 1-20** – Utilities
U146 – **APDC 25** – Xlisp, Mod2, logo, forth
U153 – **Xenon Utils** – Seventy-five utilities
U156 – **Garfield Clipart** – Useful stuff?
U159 – **A64** – Autobooting C64 emulator
U160 – **RSI Extras** – More bobs, sprites etc.
U161 – **Anthrox Utils** *V5* – Recommended!
U162 – **Deflex Utils 1** – Unusual collection
U170 – **Icon Magic** – Excellent programme
U172 – **DTP** – *NEW ENGLISH VERSION*
U176/7 – **WindowsBench** – By MikeSoft (tx)
U181/2/3 – **QL Emulator** –Excellent
U188 – **Programming 1** – Lots of info
U192 – **Night Flyers 4** – Excellent disk
U195 – **Opti Utils 2** – Latest version utilities
U196 – **Opti Comms** – ***Ultimate*** Comms disk
U197 – **C Dir Tools** – Stuffed full of them!
U199 – **NUKE** *V1.4b* – **Latest Release**
U200 – **Imploder** *V4* – **Latest Release**
U207 – **Printer Utils** – By the Assassins
U208 – **Fractal Generator** – By T Richter
U209 – **Dynamite Fonts2** – More cut n paste

EDUCATIONAL & GAMES

G01/2/3/4/5 – **Ed-Pack** – Teenagers & over
G06/7 – **Learn & Play** – Infant + junior age
G11/2 – **Game Solutions** – Very good
G14 – **Talking Colouring Book** – Nearly OK
G20 – **Turrican II Demo** – Playable demo
G22 – **Tennis** – 3D game, needs 1 meg!
G31/2 – **Star Trek** – By Tobias Richter
G35 – **Board Games** – Includes Monopoly
G38 – **Frantic Freddy** – Good arcade fun
G39 – **Flaschbier** – Excellent game
G41 – **Amigaman** – Chess *V2* also drip
G43 – **Megaball** – Brilliant breakout clone
G44 – **Wacko Jr in Wonderland** – Brilliant
G46 – **Seven Tiles** – Good Speedball clone
G47 – **Wizzy's Quest** – Very nicely done
G50 – **Shapes** – Absolutely brilliant for kids
G52 – **Merv the Merciless** – Excellent
G53 – **Zeus** – Very addictive tile game
G55 – **Sealance** – Sub strategy type game
G62 – **POM POM Gunner** – *Very Good!*
G63 – **Hollywood Trivia** – Quite good
G64 – **Mental Image 1** – Best PD selection
G69 – **Darkstaff** – Written with speccy emul
G70 – **Skier** – Excellent game
G72 – **Snakepit** – Suitable for the kids, good
G73 – **Blockit** – Very nicely done by EP
G74 – **CUBULUS** – By Tobias Richter
G76 – **Ready Robot** – Educational pre school
G80 – **Peter's Quest** – Lovely graphics
G82 – **The Maze** – Incredible 3D maze
G83 – **Tomtespelet** – Needs two players
G87 – **Llamatron** – Brilliant by Jeff Minter
G89 – **Chinese Checkers** – Addictive game
G90 – **Mayhem** – Similar to Datastorm
G91 – **Insiders Club** – Stock Market strategy
APD59 – **Super Quiz** – Excellent quiz game
APD62 – **Arcadia** – Nice breakout clone
APD110 – **Crossfire** – Very nicely done
APD115 – **Baloonacy** – Superb for the kids
APD130 – **Wooden Ball** – Brilliant!!!
APD137 – **Tile Trial** – Good tile game
APD142 – **Pair Crazy** – Very good
APD146 – **Fruit Machine** – For the addict
APD148 – **Demolition mission**
APD149 – **Gobbit/Pontoon** – Both good
APD150 – **Quizmaster** – Excellent
APD178 – **Mastermind/Pairup** – Good
APD180 – **Dungeon Delver** – Brilliant
APD182/3 – **Pixie Kingdom** – Very good
APD314 – **Blackjack Trainer** – Superb
APD315 – **Silver Bars & The Enemy**
APD326 – **Hyperball** – ***Best yet, get it***
APD329 – **Fruit Machine** – Brilliant game
APD334 – **Snake in the Grass** – OK

BUSINESS & SERIOUS

B02 – **Wordwright** – Wordprocessor
B04 – **Clerk** – Accounting
B06 – **U-Edit** – Very powerful wordprocessor
B07 – **Flexibase** – Powerful yet easy to use
B09 – **Amibase** *V3.76* – Excellent database
B10 – **Inventory & Memopad** – Very handy
B12 – **Business Card Maker** – Pretty Good
B14 – **Visicalc** – Similar to Lotus 1-2-3 on PC
B17 – **QED** – Superb text editor
B18 – **Textplus** *V3.0E* – Edit crunched files!
B19 – **600 Business Letters** – Brilliant
B20 – **Messysid** *V2* – Latest version
B21 – **BBase II** – Easy to use database
B22 – **DataBase Wiz** – Name & address
APD52 – **Forms Really Unlimited**
APD119 – **Electrocad demo** *V1.4*
APD132 – **Family History Database**
APD138 – **Spanish Tutor** – Pretty good!
APD257 – **Cassette Labeller** – For the inlays
APD266 – **Amos 3D Demo**

SLIDESHOWS & PICS

P05 – **Pendle Europa Slideshow** – V. Good
P09 – **Sunslide II** – Exceptional quality
P11/2 – **Nasa Slideshows** – Both 1 & 2 here
P25 – **Roger Dean** – Excellent slideshow
P28 – **Sunslide III** – Brilliant follow up
P32 – **Agatron 6** – From Tobias Richter
P33 – **Agatron 8** – More from TRs stable
P40 – **Max's Art** – Very nicely done
P41 – **Nemesis Prologue** – From Hanibal
P47 – **Joe Slideshow** – Exceptional artwork
P48 – **Psygnosis Slideshow** – Rather brilliant
P54 – **Sunconnection** – More from this group
P62/3 **Channel 42 & Silents** – Very good
P65 – **Agatron 12** – Fantastic quality
P66 – **Fraxion Future Visions** – Very good
P67 – **Agatron 11** – Incredible standards
P76/7 – **Nemesis Chapt. 1** – The next chapter
P78/8 – **Laurel & Hardy** – Brilliant for fans
P83 – **Invisible World** – Bugs n things
P85 – **Robocop** – By Hanibal, *Unbelievable!!*
P89 – **Art for Arts Sake** – By Hanibal, Brill
P91 – **Pixelium** – Absolutely superb
P93/4 – **Star Trek Megademo** – 1 Meg min
P95 – **Rick Parks Art** – Quite incredible

ANIMATIONS (most 1mb)

A06 – **More Aerotoons** – By Eric Schwartz
A10 – **Batman** – This is brilliant (by ES)
A11 – **Puggs in Space** – Brilliant
A12 – **Probe** – The most famous of all anims
A17 – **Stealthy II** – Excellent little animation
A19 – **Star Trek Fleet Manoeuvres** – Good
A20 – **Agatron 26** – Dry dock
A13 – **Agatron 2** – Includes F15 fighter
A48 – **Busy Bee & Tree Frog** – Very good
A49 – **Fractal Flight** – Small screen anim.
A58 – **Walk** – Brilliant chrome legs walking
A61 – **Agatron 15** –Billiards & Lotus + F15
A62 – **Stamp Collector** – Brilliant sequence
A63 – **Juggler II** – Very, very funny. See it!
A67/8/9 – **Station at Kerne** – 2 Meg
A70/1/2 – **Lost In Space** 2 Meg
A76 – **Agatron 30** – Millenium Falcon
A77 – **Agatron 17** – Twak and Mensch
A78 – **Agatron 24** – Kid and ping pong
A79 – **Agatron 33** – Probe – Bird of prey
A81/2 – **Walker & A1000** – 1 Meg
A83 – **Discovery Shuttle** – Very good
A84 – **Agatron 36** – Bird flight
A87 – **Car** – Lotus & Unicycle, brilliant
A88 – **Bunsen Burner** – Brilliant 3D flight
A89 – **Agatron 22** – Includes aproach + more
A90 – **Agatron 20** – Belle Huey Helicopter
A91 – **Franklin the Fly** – Needs 2 drives
A94/5 – **X-Wing** – Rather brilliant sequence
A96/7 – **Light Cycle** – From Tron and Brill
A98/9 – **Anti-Lemmings** – 2 Meg
A100/1/2/3/4/5 – **The Wall** – Exceptional
A107/8/9/10 – The Landing – 4 Meg
A111 – **Mars** – Absolutely incredible, get it!
A112 – **Juggette II** – Another hilarious anim
A115 – **Agatron 27** – Book and others
A116 – **Agatron 28** – Disconnect, Beautiful
A117 – **Agatron 29** – Millenium Falcon
A124 – **Shuttlecock** – By Eric Schwartz
A126 – **Real 3D Anim** – "Real Pinball"
A127 – **Real 3D Anim2** – T-Pot and balls (?)

MUSIC

M01 – **Sound Samples** – Includes perfect sound
M04 – **Vangelis** – Brilliant music & graphics
M10 – **Jean Michel Jarre** – With good pics
M14 – **Brunos Music Box 2** – Very good
M15 –**Sound of Silents** – 7 tracks, V-good
M18 – **Amigadeus** – By Rod Baxter, Brill
M19 – **Classix 1** – Mr Baxter strikes again!
M20 – **Classix 2** – More of his formidable work
M34 – **APDC 11** – Sound utilities
M35 – **APDL 28** – ***MIDI UTILITIES***
M42/3 – **Soundtracker** *V4* –Excellent
M52/3/4/5 – **Modules** – Need I say more?
M58/9/60 – **Metal Modules** – Good
M61/2/3 – **Sound samples for S/Tracker**
M87 – **Games Music Creator** – Difficult
M88 – **Pendle Europa 6** – Excellent disk
M105 – **Burning Independence II** – Brill
M115 – **Scoopex Music Utils** – By the score
M121 – **Sunconnection** – Nicely done
M131 – **Deluxe Music Data** – Needs DM
M134 – **Kefrens Jukebox** – Good
M145 – **Midi Programmes**
M152 – **Midi Programmes** – More
M165 – **MED** *V3.11* – Fantastic music editor
M169 – **Chip Music** – 43 tracks to hear
M172 – **Audiomagic** *V1.1* – Brilliant utilities
M175 – **Startracker** – 8 track tracker (?)
M182 – **Future Composer** – Pretty good
M186/7/8 – **Do The Bartman**
M192 – **Do The Bartman Re-Mix!!**
M196 – **Powerlords Sound Utilities**
M198/9 – **Vivaldi** – By Rob Baxter
M201/2/3 – **House Samples**
M208/9 – **RSI Modules Disks**
M216 – **Drums & Pipes** – Brilliant
M223 – **RSI Modules Disk 3**
M225 – **Audiomagic** *V2* – More utilities
M227 – **Psygnosis Samples** – Sound samples
M223 – **Jean Michel Jarre Live** – ***Brilliant***
M234 – **Delta Music Editor** – Very good

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LPD1 – Colouring Book – Simple for pre-school children upwards **512k**
LPD2 – Arc Angel Maths – Educational games, add, subtract etc, etc **512k**
LPD3 – Galeons – Very effective follow up to the Dogfight game, Excellent **1 meg**
LPD5 – Jungle Bungle – Superb adventure game for kids, Icon driven **1 meg**
LPD8 – Work & Play – 3 educational games for young kids. Recommended **1 meg**
LPD14 – Play It Safe – Aimed at educating the young kids about safety **1 meg**
LPD20 – Wordy – A very nice, simple to operate wordprocessor, V.good **1 meg**
LPD22 – LC10/200 Fonts – This enables you to install more fonts in your printer **512k**
LPD24 – The Shining Way of Kung Fu – This **TWO DISK** set is very nicely put together but costs a little more <u>**£5.50**</u> **1 meg**
LPD25 – The Mission – Brilliant text adventure written in Hi Soft **1 meg**
LPD27 – Flower Power – Educationally orientated for the very young **1 meg**
LPD28 – BudBase1 – Beautifully easy to use and extremely user-friendly, try it **512k**
LPD29 – Big Top Fun – Yet another brilliant educational game from Len Tucker **1 meg**
LPD30 – Shymer – Wonderful adventure game for kids, beautiful graphics **1 meg**
LPD32 – Hard Drive Menu System – Superb hard drive utility, used by us!
LPD33 – Amos Adventure Kit – This needs **AMOS** to enable you to create your own adventure games, excellent
LPD34 – Invoice Printer – For use by the Small Business firms, just print out your invoices on your **OWN** headed paper to save cost and time. Very nicely done **1 meg**
LPD35 – T-TecDraw – Full technical drawing program. Fantastic results **1 meg**
LPD38 – Amos Art – Full of goodies for inclusion in your own **AMOS** creations
LPD40 – SpriteBank Editor – Bloody Superb, Need I say more? Needs AMOS
LPD41 – Rescue – Created using incentives 3D con kit and is nicely done! **1 meg**
LPD45 – MUSIC BOX – The ultimate in music education for kids, this is quite simply the best I have ever seen **1 meg**
LPD46 – Magpies Clipart – Crystal clear images of clipart, categorised **512k**
LPD47 – Dirty Cash – Beautifully done fruit machine simulator, excellent **1 meg**
LPD48 – SPARX'S STOCKING FILLER – A wonderful Christmas gift for any child with the emphasis on fun more than education, quite brilliant! **1 meg**
LPD49 – Marvin the Martian – A traditional maze game, for children **1 meg**
LPD50 – Magpies Clipart 2 – More quality clipart images from the magpie **512k**
LPD51 – Magical Young Artist – A colouring in type program for kids **512k**
LPD52 – LC24/200 Fonts – Same as **LPD22** but also thought to be compatible with most printers! **512k**
LPD53 – Magpies Clipart 3 **512k**
LPD54 – Magpies Clipart 4 **512k**
LPD55 – SpriteX V1.32 – An update to the earlier version and enhanced **AMOS**
LPD56 – C Text V1.32 – An extension to AMOS to allow you to use icon based fonts which can be drawn in up to 16 colours. Some fonts are supplied on disk. **AMOS**

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Land Builder

Virus Free PD Disk No 2056

At last, a simple to use fractal generator! This is just the thing for all the people who like the idea of fractals but are a bit confused by all the facts and figures.

All you need to do is type in a seed number (there are literally tens of thousands to choose from), and then select a level of detail.

The program then spends the next few millenia drawing your fractal world. Once that's done, you can adjust the picture to suit your tastes and then look at it, say "that's a very nice fractal landscape" before doing another one.

There's really very little else to say about it. It's a fractal designer, it's fairly slow, and you've probably already got at least another three somewhere at home. Still, if you haven't and you're desperate to see some fractal landscapes, then go get it.

Skoda Challenge. Imagine SuperCars slowed right down to a snail's pace. With dodgy steering. That's Skoda Challenge. And oddly enough, that's Skoda cars as well, so it's startlingly realistic.

Even with these deliberate "problems" it's still fun to play. You can have four players at once, and all you have to do is trundle around and shoot each other, with front-mounted Skoda cannons (?). The slow response actually makes confrontations loads more fun as you wobble around each other trying to get the other car in your sights. Silliness abounds, but it's wonderfully inventive.

All in all, a high quality package. Two barnstormers and two OKs, for the price of a disk. Can't be bad.

QuizMaster

Amiganauts Disk No 876

And to round off our festive selection, a quiz game to keep you huddled over your Amiga in the cold January evenings. Who knows, you might even lure the family technophobes in for a game!

The quiz takes the form of a race, in which each player must advance their car by answering questions correctly. You can have up to four players and the questions are randomly chosen from four categories. And the whole caboodle was spawned by AMOS.

It's very well laid out, and feels more than a little like the computerised Trivial Pursuit. Unfortunately they've opted for a different answering method, where you must type answers in, which means that you can get an answer wrong for silly reasons.

For instance, when asked "What German city is famous for a scent it produces?" do you answer "Cologne" or "Koln"?

This "knowing the answer but still getting it wrong" situation is more frustrating than debating whether or not the player called out the right answer. At least you can sort that out among yourselves.

There are over 1,000 questions, although we found that some did repeat during our first game. The level of difficulty is pitched very high, so it might take a long time to finish a game. As if this was anticipated, there is an option to save the quiz and carry on at another time.

Apart from these relatively minor niggles, it's a worthwhile product. Of course, it's best with four, but you can play alone and learn all the questions so you win every time.

Either way, it's a fun little game and as long as you don't mind being made to look like a complete thickie, you'll come back to it time and time again.

Opti Utils 2

Virus Free PD Disk No 2057

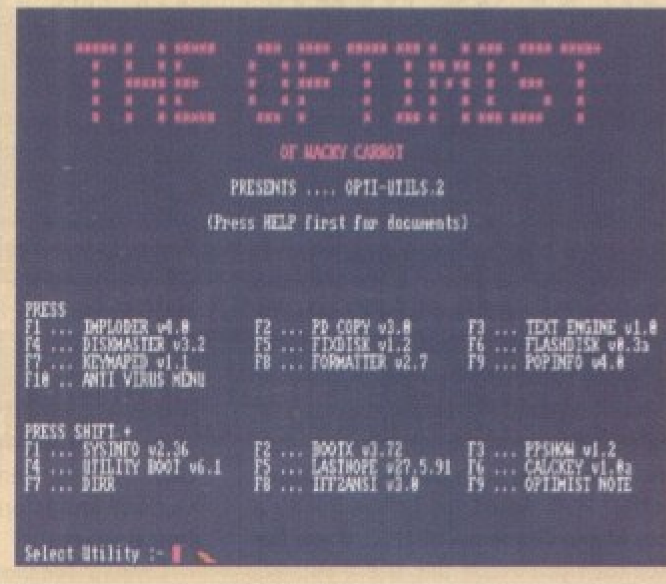
Having had their fingers burned by their ventures into the, shall we say, "fruitier" aspects of public domain, Virus Free have cleaned up their act and are now dealing in respectable utilities disks and other such decidedly normal wares. And apparently the dog is a lot better now.

This Opti Utils disk contains four virus killer, including Nuke, the Saddam virus killer which could come in handy for any *AUI* readers out there, plus 18 other handy and not so handy programs.

It deserves a mention as it includes the Text Engine, a PD wordprocessor that got the thumbs up last issue. This alone makes the disk worth getting, with the other stuff making a nice bonus.

And what of the other stuff? Well, there's your usual selection of disk formatters and repairers, PPShow of course, and a disk copy program that's a good deal faster than the professional X Copy. And, no, it won't copy commercial software, so you can put that wooden leg away right now.

A good selection, with some predictable utilities but with the inspired inclusion of Text Engine. Get it just for that, if needs be.



A nice selection of utilities, plus the Text Engine, completely free!

Amiga Coders Club

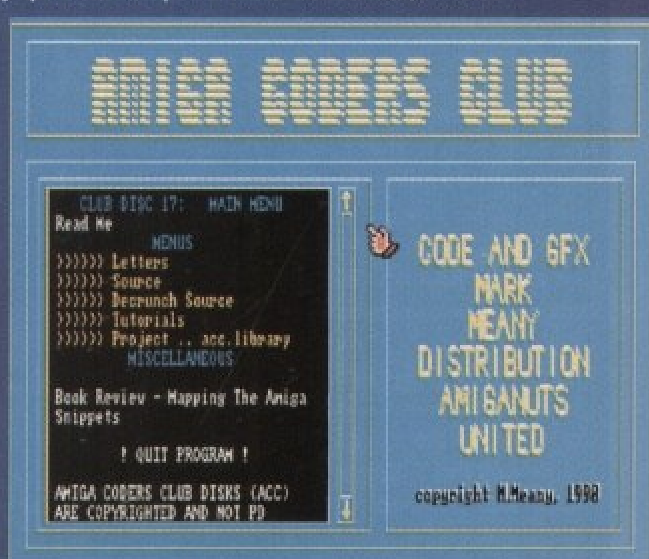
Amiganuts

Yes, the Amiga Coders Club are still going from strength to strength. They've now released a special assembler disk to assist all you would be Bitmap Brothers in your quest for the perfect parallax.

The disk-based magazine that they produce is fairly small, but it contains a wealth of tips and hints for beginners and they don't scorn those who don't know the lingo. The feel of the thing is all very "matey", with most of the regular contributors exchanging jokes and zany tales of data processing on the letters page.

If you're a coder, no matter how experienced or inexperienced, then I advise you to get in with these guys. You'll probably learn some new stuff and make loads of friends all over the country in the process. This is the sort of community spirit that keeps PD alive. Clichés R Us, or what?

All things techy are explained and talked about in the Amiga Coders Club. Anoraks not necessary



Who ya gonna call?

If you want to get hold of any of these disks then give the relevant company a shout

Strictly PD,
11 York Place,
BRISTOL
BS1 5UT

Virus Free PD,
23 Elborough Road,
Moredon,
SWINDON SN2 2L5
Tel: 0793 512321

AmigaNuts,
169 Dale Valley Road,
Hollybrook,
SOUTHAMPTON
SO1 6QX

Warpdrive PD,
110 Burton Avenue,
DONCASTER DN4 8BB
Tel: 0302 859715

DEMO round-up

Looking for scrollers, vectors and sine waves? Jonathan Maddock casts an evil eye over this month's demos

If you're a bit strapped for cash then you could do a lot worse than buying the Kryptic's demo disk. It contains loads of brilliant demos – for the price of a packet of Cornflakes you get the LSD Despair demo (which needs two drives to work) and the uniquely named Definition of Boombastic by those demo genii The Rebels.

Just by buying this disk you get all the scrollers and light-sourced vectors a demo fan could every need. Great graphics and great music – what more could a demophobe ask for?

Now for those of you who hate all this hard-core dance malarkey, there's a disk from Amiganuts which is tailor-made for all you classical music fans out there. It's top raver George Gershwin with his classic Rhapsody in Blue (you know, the tune off the Galaxy adverts). Being a hard-core dance music fan myself, all I can say is that it's well put together and it sure sounds nice on the ole' lugholes.

Now for some real music – hard-core dance music, that is. This disk from 17-Bit software contains two demos, one by The Rebels which is called The Thing (the hard-core dance one) and one by TSB (not the hard-core dance one). The Thing is serious dance stuff and contains starfields galore, while The TSB disk – it stands for The Special Brothers, fact fans – serves as a nice complement and also contains loads of vectors, starfields and other such demo-type things.

What's this? Well, would you believe it – it's a fantabulous Miami Vice remix by HCC. If you like Miami Vice then you'll love this and if you like Don Johnson then you'll be trembling with excitement, because there is a mega digitised picture of the man in question. Nice, very nice indeed.

The next offering is poptastic in more ways than one because it's a great megamix of Harry Enfield's Loadsamoney, which was released a while back. A definite "fans only" disk, this one. All I can say is bosh bosh zoom zoom wallop dosh – get the disk and you'll find out what I'm going on about (I think he's finally flipped – Ed). It's available from the boys at Amiganuts, who also do a lot of work for charity. More music? Yes, I'm afraid it's true, and even those little Lemmings have managed to get on to this disk.

It's entitled Lemming Curd and it's got five great tunes on it. All are of excellent quality, and check out the tune entitled Dentistry – it's exceptionally good. Also on the disk is the Gods remix – a great rehash of a pretty wonderful game, courtesy of the Bitmap Brothers.

The big Austrian is back, and this time he's appearing on 17-Bit's two disk Terminator 2 slideshow. It features loads of pictures of Arnie in action, plus shots from other scenes in the movie. This is definitely for Arnold Schwarzenegger fans only (so that's just about everyone, then). Every time it was shown in the office there were great cries of "Uzi 9-millimetre" and other such Arnie quotes. For a slideshow the quality of the pictures is very good indeed.

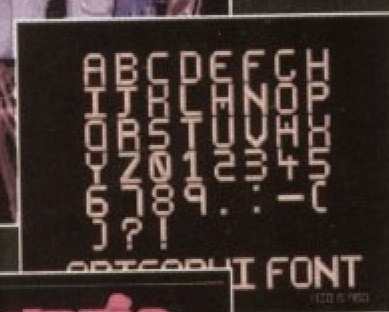


Techno Fright

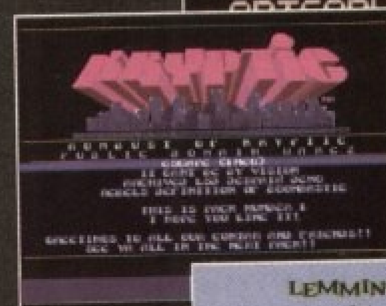
Other recommended disks include 17-Bit's Powerdemos featuring offerings from The Silents and Phenomena, which are both well worth adding to your collection. Also from 17-Bit is yet another Rebel demo – this one's entitled Outland and is probably their best yet.

Divina's Techno Fright has excellent graphics and thunderous music, which combine to make it a truly great example. Also worth a mention is Exile's Fontdisk which contains loads of great fonts all wonderfully drawn (including the very dodgy pornofont). The digitised picture of the Exile team at the beginning shows that these guys aren't even out of their nappies yet! And their mothers think they're such nice lads...

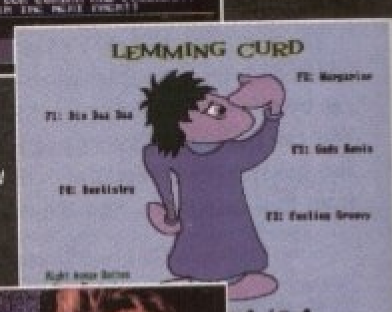
Well that's all for this month – see you next time for more music, demos and animations. Same time, same channel.



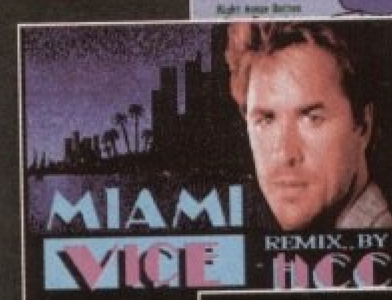
Fontdisk



Kryptic



Lemming curd



Miami Vice



Rhapsody

Animated animal antics

The first of our featured animations is from talented stalwart Eric Schwartz. This beauty is entitled The Dating Game.

In it, Eric breathes life into a frog and a squirrel, who are both getting ready for a date. The anim is very Tex Avery-ish and contains lots of slapstick humour. As usual it is very slick indeed and I can't find fault with it anywhere. It also contains a very, erm, physical ending. From Potteries PD, it's a definite must for anyone's collection. Unfortunately it needs 3Mb to run, so I suggest you buy it and then find a rich friend who has lots and lots of memory – even if it means pretending to be his best mate for a week.



Remember Puggs in Space? Well, the dudes who created the demo that started a revolution are back. Their long-awaited sequel is named Fillet the Fish. Featuring a fish (surprise surprise) this demo is as good as, if not better than, Puggs in Space. The sequel has retained all the humour and great graphics of its predecessor – Jester Brothers International have come up with a cracker.

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DV29 - Big Top Fun brilliant number and picture program for young children. 1MB. £3.50.
PSL14 - Classroom Maths. £3.00.
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FF523 - ScreeJaeger save/print any screen.

ANIMATIONS

SCHWARTZ ANIMATIONS:
FF413 - Swiss Army F-16 In Combat, Stealthy Manuever II, Juggette. 1MB.
FF414 - Batman, LateNight,Terminal.
FF417 - Coyote 2: The Road Test.
FF418 - Amy the Squirrel. 1MB.
FF423 - Pogo to Mam'o'selle. 1MB.
FF450 - AmyVsWalker. 1MB.
FF490 - ANTI LEMMING. 2MB.
FF504 - SHUTTLE COCK. 1MB.
FF505 - THE DATING GAME. 3MB.
PLUS OTHERS
PD630 - It Read Top Secret animation cartoon story.
PD651 - Tree Frog, Window Man, Walking Man and Hammer.
SMAUG 213 - Shoope a silver woman with a teapot head and a hoola hoop.
SMAUG 90 - Harrier Jump Jet.
SMAUG 104 - Exploration - a globe with the Amiga logo on it spinning around then a missile is launched and this turns into a satellite! 1MB RAM.
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SMAUG 135 - Mars Flight a single seater space fighter flying over scenes from a habitated planet supposedley Mars. Requires 1MB.
SMAUG 136 - Twilight a car with headlamps on driving along a road in a landscape. 1MB.
SMAUG 142 - Monkey running and juggling a banana. 1MB.
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SMAUG 150 - Jet aircraft flying around a silver Shiney ball inside a bubble. 1MB.
SMAUG 159 - Congaman and Gums a chap playing the congas and a fat fish jumping out of the water. 1MB.
PD1 - Walker I. 1Mb RAM.
PD2 - Walker II. 1Mb RAM.
PD73 - Star Trek Enterprise Dry Dock.
PD74 - Star Trek space craft flying around in a circle.
PD76 - Star Trek Shuttle landing on the SS Enterprise.
PD427 - Star Trek Leave Space Office.
PD83 - Space Ace.
AMU42 - The Juggler.
FF200 - 'NotBoingAgain'. 1Mb RAM.
FF208 - 'Asteroid Field' a space ship 'swurving' through an asteroid field.
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FF503 - PCQ pascal compiler.
FF470 - BCF Fortran 77 V1.3c.
FF519/520 - Oak Lisp. £6.00.
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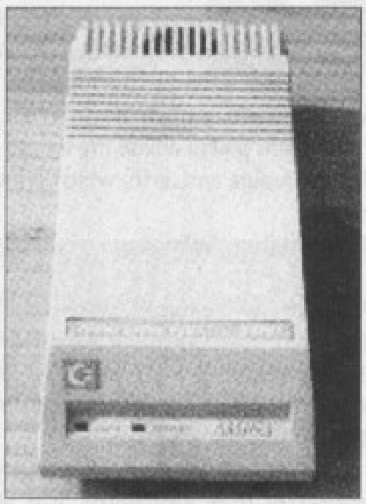
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Daisy, daisy...

When I bought my standard A590 as it first came onto the market, one of its good points was its ability to accept drives, daisy-chain fashion, through the rear expansion port. Since I have now come close to filling my 20Mb, I would like to make use of this port, but can't find anyone to tell me how.

Can I just connect another bare hard drive straight to it, or do I need another interface of some kind? I recently saw a hard drive in an electronics shop for the DM equivalent of £100. I know it's a risk, but for that price, as long as it's a SCSI drive, I'll take the chance.



The drive has no docs and no box, just an edge connector, so how do I go about sussing out the connection? Is there a standard format for these things?

L/Cpl Robins, 75 Sqn, 3 ADTR, BOAR

The procedure by which you connect an external SCSI to your A590 is relatively simple as long as the external device is of the proper kind.

First, make sure it is a standard SCSI device, and that it has either the full SCSI 50-pin connector, or the smaller DB25 connector. If there is a 50-pin connector, don't worry, as you should be able to find a 50-to-25 cable quite easily. The next requirement is that the drive has its own power supply. If the unit you've been looking at has a built-in PSU, great, but if it doesn't, it should at least have a power socket to which you can connect an external PSU.

As there is no documentation with your drive, you'll have to guess at the power requirements. A good estimate would be either +5V/2.0A or +12V/1.5A (both DC). You might have to experiment with your A590's dip switches. Switch 2, in particular, concerns the way your interface addresses Logical Unit Numbers, and may have to be set to ON. If you can suss this lot out, and the SCSI device is terminated with a resistor, connection will be a matter of plugging the 25-pin cable into the back of the A590.

A better way of upgrading the A590 might be to back down the hard drive to floppies, then purchase a 40Mb or 80Mb drive unit to replace the existing 20Mb unit and double or quadruple your storage space.

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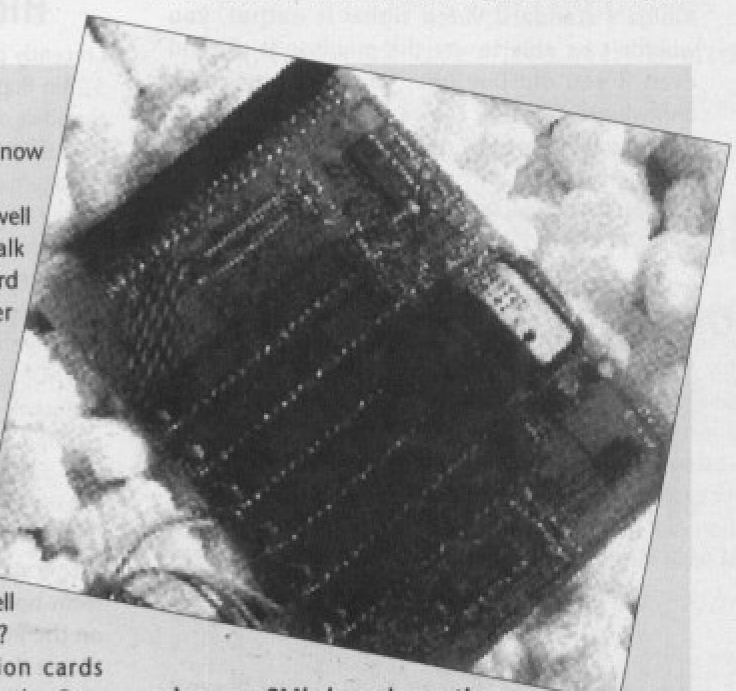
Save your saes please – we can't reply personally

Plus problem?

I've had an A500 for three years, and am now the proud owner of an A500 Plus.

Reading through other magazines as well as your own, there has been a lot of talk about fitting extra chips to a motherboard making the trapdoor useless for further expansion. This isn't true!

I fitted a half meg card to my A500 Plus and what do you think I got? 1.5Mb of chip RAM! Correct me if I'm wrong, but the Super Agnus (8375) can handle up to 2Mb of chip RAM just like an A3000. I want to buy a 2Mb expansion board for the Plus so I can use the full 2Mb of chip RAM as well as 1Mb of fast RAM. The question is, how?



There are a lot of 1.5Mb expansion cards around, usually requiring a connection to the Gary chip. Are these only for the 1.3 operating system? On a final note, Datel's Action Replay II cartridge doesn't seem to work on my A500 Plus.

Joe Wood, Wigan

Tsk! The comments you refer to were in reply to letters on the subject of soldering RAM chips directly onto a rev 6.2 motherboard from a 1.3 A500. Commodore's own engineers faint at the mere mention of such radical measures, and are adamant that the conversion would mean the end of your trapdoor for the purposes of RAM expansion.

As for the A500 Plus, there are, to my knowledge, no 2Mb boards on the horizon, but Commodore and a number of third party manufacturers are already developing 1Mb boards. One or two of these may be available by the time you read this reply.

I'm not sure yet if any of the boards will allow the user to specify which kind of memory the board adds, but let's hope this is the case. Many programs are designed to work with fast RAM, and as there is none on the A500 Plus, we can only pray that an expansion board which offers fast RAM is released soon.

All 1.5Mb boards which connect to the Gary chip will be incompatible with the A500 Plus unless redesigned by the manufacturers.

Saddam again

Firstly, thank you for another great CoverDisk. However, I have a slight problem with Virus Checker 5.26.

In using November's CoverDisk, I have found three viruses. These are Saddam, Byte Bandit, and the Australian Parasite Virus. While I think the virus killer has disabled Byte Bandit, both Saddam and the Parasite Virus appear still to be in memory.

The Saddam virus is proving particularly difficult to kill, as Virus Checker claims that the computer and disks are both infected. I have followed your instructions and still cannot kill the virus, and I'm getting desperate. Can you help?

Christopher Riley, Littlemore

Unfortunately, I don't have a great deal of information on the Australian Parasite virus, save that it is a boot block virus which infects your memory. Any detailed info' from a reader with knowledge of APV would be appreciated.

As long as you have cleared the virus from the suspect boot block, and turned your machine off for 30 seconds, the virus should be no more. Write-protect all your disks until you're sure it's not still active on one.

As for Saddam, you'll have discovered the annoying habit he has of seeming always to be in use once he has been activated. In the inactive form, Saddam is as deletable as any file, but once ➤

the virus is activated he is impossible to remove save by formatting the infected disk.

Proceed by copying all essential files from the infected disk to a new disk, check them with FixSaddam to make sure they haven't been corrupted, then copy a fresh disk-validator to the disk. Format the infected disk, and you should have seen the last of the Red Adair fan club.

Putting the boot in

Is it possible to boot from RRD: on a 1.2 Kickstart machine? I have 1Mb RAM and an extra drive.
Christian von Krogh, Trondheim, Norway

No. You'll have to buy the 1.3 Enhancer Software pack and Kickstart ROM to auto-boot from RRD:. Sorry!

Multisync without flicker

I own an A500 with 1Mb RAM, an external drive, a colour printer, and Midi keyboard linked via a Midi interface. The weak link in my system, however, is my reliance on a TV set for display purposes, which doesn't do justice to the visual output, be it graphics, MusicX, or Wordworth.

Having read the article on multisync monitors in your November issue, I thought "Great! I must get a multisync", because I'll be upgrading to the A1500 when Workbench 2.0 is shipped, and then I can get an A2320 card for it.

However, when I visited a recent trade show and asked some people for advice, the differences in opinion were rather extreme. Some tried to sell me a multisync on the spot, others told me I would be wasting my money, another said the monitor wouldn't work without a flicker fixer.

I should like to buy a multisync and use it on an un-flicker-fixed A500 in normal mode for the present. Would this work? Next, when Kickstart 2.0 is available, I would part-exchange my A500 for an A1500 and add an A2320 flicker-fixer card to enable the use of all graphics modes.

Please tell me if I'm taking a sensible upgrade route, or if I should stick with my present system and buy a Philips CM8833 or Commodore 1084S.
Philip Hawkins, Newbury

The upgrade path you're contemplating would be a sensible, gradual expansion of your system except for the fact that it won't work. Whoever tried to sell you a multisync without a flicker-fixer was trying to make a fast buck and was doing you no favours.

Unless you buy a multisync which can sync down to 15.5kHz, the frequency at which the Amiga's standard video signal is output, you wouldn't be able to use the monitor at all, and even if you did buy one, you'd still have the annoying flicker that comes with interlace mode.

For your purposes, possibly the best upgrade path is to wait until official ECS and Kickstart 2.04 kits are available. You should then upgrade your Amiga and use the new Productivity mode, which gives 640 x 480 non-interlaced in conjunction with a 15.5kHz-capable multisync. Monitors of this type are, unfortunately, rather expensive, but probably less so than buying both a flicker-fixer and one of the cheaper multisyncs.

Dumping Kindwords!

I use Kindwords Home Office and wish to buy a letter quality printer capable of graphics presentation. Ideally, I would like to buy the Canon BJ-10e bubblejet, but I'm unsure whether there is a suitable driver for it.

Can you please advise me if I can run this printer for the Amiga and, if so, which printer driver is correct?
Peter Barton, Adlington

You have two choices. Either buy the Canon and look for the shareware printer driver – you should find it in a PD library which supports the Fred Fish range – or you could dump Kindwords in favour of Wordworth.

Not only is Wordworth a vastly better word-processor than Kindwords, it is also on offer to Kindwords owners at a knock down price. If you send your original disks to Digita, they will sell you a copy of Wordworth for £89.99 instead of the usual £129.99.

Wordworth 1.1 now has direct support for a variety of printers with their built-in fonts. There's a special printer driver for the BJ-10e, and Wordworth enables the easy use of any of the printer's fonts. Digita can be reached on 0395 270273.

Hidden menu revealed

I recently purchased a new A500 Plus, and having a 5.25in floppy from my previous Amiga, I didn't like the idea of opening the machine to install a new boot switch, so breaking my warranty. I looked for an external switch and couldn't find one, and for a while I was stuck.

Then I found out that the new Amiga has a hidden screen! To access this, reboot and at the same time hold down both mouse buttons. The hidden menu will appear after a while with options for DF1, DF2 and so on. It's possible from this screen to choose which floppy to boot from!

Hope this is of some use to the rest of your A500 Plus-owning readers.
A Bage, Middlesborough

We already knew about the Boot Menu available from boot up, as almost the first thing we tried on the Plus was to hold down the mouse buttons to see if there was a hidden boot option for 1.3 emulation.

Thanks for writing in, though, as we forgot to mention this facility in the A500 Plus review. So many improvements and so little space to write about them.

In fact, there are a couple of things you don't mention. The Boot Menu's advanced options page provides information on device types, their boot priority, the device handlers they use, and unit numbers.

You can choose to disable any device, which will save users of 1Mb machines having to disconnect extra drives when playing large games, and can even decide to disable the startup sequence.

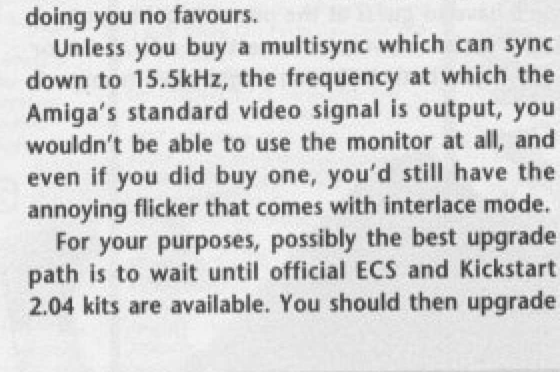
Mystery of error 2/2 revealed

I've just started delving into WorkBench after using my Amiga for games over the last year or so. My main problem, apart from terminal confusion, is with icons. I've been copying and moving and renaming them, but there are a few errors I keep running up against.

The first is error 205, which I've now sussed out as being the one that appears when you try to click on an icon which has no file attached. Error 212, however, is causing me a lot of grief.

I've used Iconmaster from your excellent WorkStation disk to create some fantastic icons, and used them for just about everything. My WorkBench screen now looks superb, but it keeps causing errors. What can I do?
Jason Samson, Glastonbury

Your problem is as simple as its solution. Error 212 occurs when an icon thinks it's one type of file and the file itself has another idea. In other words, you may have created a smashing icon for your utilities directory, but if you save it from Iconmaster without changing its icon type, it'll think it's a tool.



To change the icons, load them into Iconmaster and select the correct setting from the Icon Type menu. Remember – a tool is an executable program file, and a project is usually a data file.

Projects will be text files, AmigaDOS scripts, or DPaint images, and they must be given the correct default tool type or they won't work when you click them. Try the Tune of the Month or file icons from the CoverDisk for examples of default tool types.

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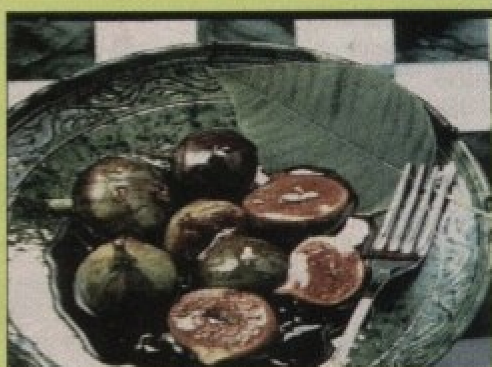
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Reflections on reality

Paul Austin looks at Videon, the latest method of immortalising still life on the Amiga









A selection of Videon's very own example files, but be warned – you'll have to spend some serious cash on equipment to achieve this sort of quality

igitising is big business on the Amiga, as a brief glance at the glossy folds of any mag will tell you. The question is: Can we mere mortals create the same results at home as the advertisers manage in the studio? The answer is usually no. Most systems only really shine when married to high-end video equipment complete with suitable lighting.

Videon, like some of its competitors, suffers badly in less than perfect conditions, and as a result it's worth looking at what's on offer besides pure digitising skill. It's here where Videon scores well, with a whole range of image manipulation and effects that many of its competitors can't match.

Unlike many recent releases, Videon is a slow scanning digitiser and requires a static subject in all modes. Because of this it's essential that you have a video that can produce a high quality static image, or alternatively a camcorder which can feed a live signal of a static subject.

The manual recommends that if you're using a VCR it must have a minimum of three heads. Particular favourites are Hi-band 8mm, S-VHS or VHS machines with four heads. Again, high-end machines are recommended if you're employing a camera. Once again S-VHS is on the list, but topping the chart are CCD cameras, primarily due to their quality output and ability to get by with less lighting.

If you're lucky enough to own a machine with separate RGB output it's perfect, as you can then take advantage of Videon's optional triple scan mode which has been included for those who want to employ mono cameras with external filters.

RGB input gives by far the best results, producing sharper and clearer images. As you've probably guessed the digitiser's default mode is full colour, so there's no need to use external filters of any sort. Simply plug in any colour signal and the hardware does the compilation work in a single scan – no swapping bits of coloured plastic and no multiple exposures.

Assuming you have a suitable source, the next question is what can be done with it and what form can your captives take. Well, to start with, there's a full selection of screen modes which expand right up to the Amiga's legal internal limit of 768 x 568 in full hi-res overscan.

Digitising takes place in full 24-bit with its selection ➤

Stylising your digital delights

Straightforward digitising isn't the hardware's sole concern. In fact, stylising your digital prisoners is taken just as seriously as their capture. The package boasts a selection of six separate effects that can be employed singly or in conjunction with others.

The effects screen contains five definable effects. They can be adjusted with click and drag sliders which assign the amount of effect employed. The sixth effect, namely the negative option, has a single button and operates as a simple off/on toggle.

The first effect in the collection is a pixelisation tool which distorts the image into large pixel-style squares often used in the TV business to protect the identity of interviewees from assorted bad guys.

Next comes the Multipic option which duplicates the image into numerous miniature replicas. Simply moving the slider defines how many segments the screen is divided into.

Solar is the rather curious title of the third effect. It alters the image by making the component colours increasingly similar to the fundamental colours within the image.

Zoom is the fourth effect, and as the name suggests it allows you to close in on any part of the image. Like all the available effects it can be repeated to increase the effect if necessary.

Threshold is the last of the slider-controlled features and works by stripping the colours from the image and replacing them with black and white. The results appear very similar to a negative. These can then have their degree of harshness defined via the slider. The last option is to produce a negative of the image. Not perhaps the most original idea in the business but a useful addition if you're working with animations. Another special effect aimed at animators awaits on the main screen. If you're using live video, one of the biggest problems is the inconsistencies in the colour palette between the various frames. Videon has addressed this particular problem by allowing you to lock the palette in the present image to all incoming frames.

Perhaps the most pleasant part of the effects process is the ability to try an effect before it becomes a permanent feature of the image. Only when the snapshot is applied does the actual image alter permanently.



Videon's built-in special effects adding an original look to an everyday image

of 16.7 million possible colours, which can be enhanced even further by a dithering routine which claims an apparent onscreen resolution of 2,000,000 perceivable colours within any image.

These grandiose claims will no doubt leave you a little confused. As you're probably aware, the only way to see 24-bit images is to invest in a 24-bit display board. Because of this Videon doesn't actually display in 24-bit, but it does convert the raw 24-bit data into the format of your choice.

Besides the obvious advantage of starting with a 24-bit source, the system has the added bonus of being able to save raw 24-bit data which can then be imported into a board at a later date.

A unique display format allows 29,791 colours to be displayed in Ham mode. Other formats include Enhanced Extra Half Bright plus Enhanced Dynamic hi-res which will display 4,096 colours in hi-res without any interruption to multitasking.

Three scanning options allow you to sacrifice speed for greater definition. This is particularly useful if you're working with dodgy source material.

One of the most pleasing aspects of the Videon system is its design. Unlike some digitisers, the hardware is contained solely within a single, sturdy, steel-encased unit.

On the back of the box are three video-ins in the form of a single composite plus a pair of Luma and Chroma inputs for S-VHS equipment, all three employing standard RF connections. Below these lurk another three ports all linking direct to the Amiga via a selection of pre-supplied cables connecting the monitor, the computer and finally a parallel connection to port the relevant digitised information between the two.

Because Videon takes the RGB signal direct from the Amiga and feeds it to the monitor, it's possible to view the incoming video and Amiga output on the same monitor by simply flicking a switch on the front of the unit.

On the opposite side of the casing lies the afore-mentioned display switch, plus a second selector that defines either S-VHS or composite input.

Alongside are three knobs which allow you to adjust contrast, colour and brightness prior to importation. Lastly comes the tracking knob which can go a long way towards eradicating interlace flicker, noise within the signal and still frame distortion.

Eradicating flicker

Because of the system's 24-bit tastes there's a small price to be paid in the memory department. In fact, three megabytes is what you should be looking towards if you want to get the best from the system

Although Videon will work with a one megabyte setup, severe restrictions will be imposed, as the incoming signal will have to be digitised line by line. As a result, the process will take up to three times longer and the option to save out raw 24-bit is lost.

Videon's most impressive features revolve around mapping images onto a selection of built-in shapes. The available shapes vary from cubes, cylinders, pyramids and cones to frustum pyramids and frustum cones. Each can be sized and rotated in all three dimensions.

As a result, a cone could have its entire area mapped, or perhaps just a single surface as shown in the screenshot of the woman sloping off into the distance.

Controlling the sizing and orientation of the chosen shape is simplicity itself. All that's required is to select the particular rotation or sizing effect and then apply the



Two of Videon's alternative screen modes – Extra Half Bright and a mono Ham example

alteration with a rodent and icon arrow combination. All changes appear in real time so you can sit back and watch as your object tumbles in three dimensional space.

The actually mapping process has two basic formats. Images can either be stretched over the entire shape, giving the effect of wrapping the image in a sheet, or mapped on to each facet of the object. As a result an image can be mapped on to any or all of the object's surfaces.

Unfortunately, it's not possible to map different images onto individual facets, but I suppose that's asking a little much for a system retailing for under £200.

Like the effects, screen mapping operations take place within a custom screen, as opposed to the effects section which only partly obscures the image. Mapping, however, occupies the entire screen during the sizing and orientation stage.

Once defined, the screen clears and is replaced with the gradual rendering of the newly mapped image. As with all of Videon's functions, this can be a rather slow process – especially if you're working with an unaccelerated machine.

Considering the cost, Videon is a relatively impressive product, but there are a few a points which do their best to scrape the icing from the cake.

Firstly, there's its reliance on high quality equipment. If you're working with budget kit, don't expect results anything like the quality shown in some of the commercial examples with this article.

Secondly, if you're in a rush, Videon might not be ideal, as some of the more complex digitising processes do take some time. Also, if you're running an accelerator you may have to remove it, as I did.

Videon offers several features which the competition can't compete with, but if you're on a budget it's probably not the best choice – which I admit sounds a little strange considering its bargain basement price tag. AC

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Software saviours

When the worst happens, do you have the software to save your precious data? Stevie Kennedy looks at the options

"Volume DH0: has a read/write error"

How many hard drive owners have reached for the bottle upon seeing this message for the first time? For peace of mind, therefore, there are two pieces of software you must buy – a backup utility, and a hard drive toolbox with the ability to retrieve lost or corrupted files.

Luckily, there are two distinct choices in both areas, one each from the commercial and public domain sectors, so users should be able to piece together a decent emergency rescue system to suit their budgets.

Two commercial packages stand head and shoulders above the opposition in the data safety market, and both are produced by the same American company. The first is Quarterback Tools, an all-encompassing hard and floppy drive repair package, and the second is QB4, the hard drive backup system from the same stable.

QB Tools, from Central Coast Software, has a number of options for the care of sick hard drives, but the two operations likely to be most useful when disaster strikes are Restore lost/deleted files, and Volume Repair.

Restore lost/deleted files makes a scan of the entire hard drive, which can take some time, though the user can specify the file to be restored if only one has been lost. When the scan is complete, and a list of active and deleted files/drawers has been drawn up, QB will display a full directory listing with the deleted files highlighted.

Lengthy operation

The user then decides which files to save, and can choose to restore them to the same volume or to another device, such as a different hard drive partition or a floppy drive. The operation can be a lengthy one, but QB seldom misses its mark, and has spared my own blushes on several occasions.

QB Tools' Volume Repair menu is the heart of the program. It has options to find unreadable blocks – for example, those areas of the drive which have been physically damaged) – then mark them as "out of service", to find but not repair bad files, and finally to find and repair bad files.

By using the find but don't repair option, it is possible to attain a clear picture of exactly which files are causing the problem before repairing the drive with the third option. When this is used, QB Tools really shows its class.

Any number of horrendous accidents can befall your hard drive, from a simply validation problem, where two or more files are trying to occupy the same part of a drive, to totally scrambled files. QB Tools has the intelligence to analyse bad files and inform the user of the precise nature of the problem. When this happens, the problem is categorised as minor, serious, or very serious. Very serious problems usually result in the deletion of the affected file, but the more minor problems can usually be sorted out. QB will recalculate checksums, and will even have a go at making sense of damaged file headers.

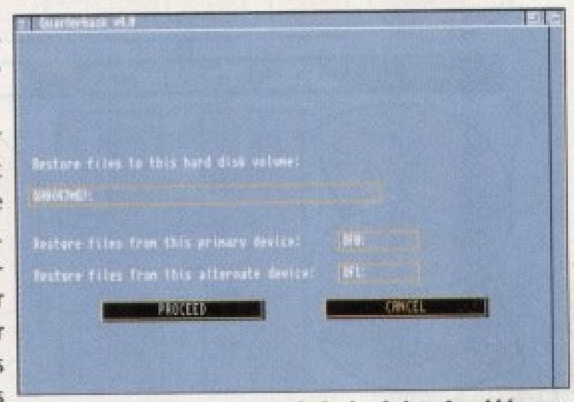
Where there is a very serious problem, such as the file header having been lost altogether, QB will offer only to delete the file, but this is quite rare.

QB Tools' close relative, the QB4 backup utility, is as powerful as any backup utility I've seen. Using this utility, I recently backed up a 52Mb quantum onto 33 floppies, which runs out at over 1.5Mb per disk.

Initially, the program takes the simple step of asking which partition you'd like backed up and to which floppy drive. It then constructs a catalogue of the hard drive – a good time to go off for a coffee – and offers the user a variety of backup options.

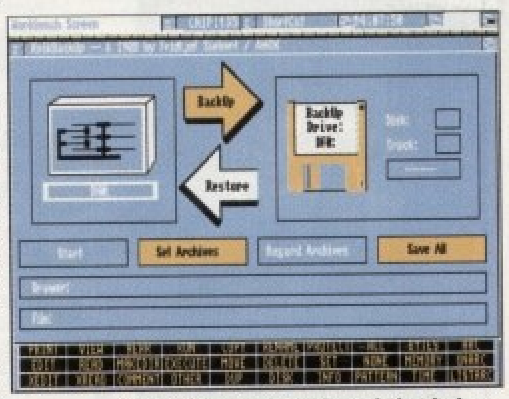
You can choose from a directory listing of all files on the disk, exclude those you don't need to back up, and decide on whether to include or exclude files with altered archive flags. The latter is an important option, because if a file has been changed since it was last backed up, you'll want to save it. If not, there's no point in including it. By checking the archive flags, QB4 can save a lot of bother.

I've used QB4 regularly for some time now, and have never been let down. As long as decent quality floppies are used for backups, QB4 should be the answer to your data security problems.



QB4's deceptively simple interface hides a powerful utility

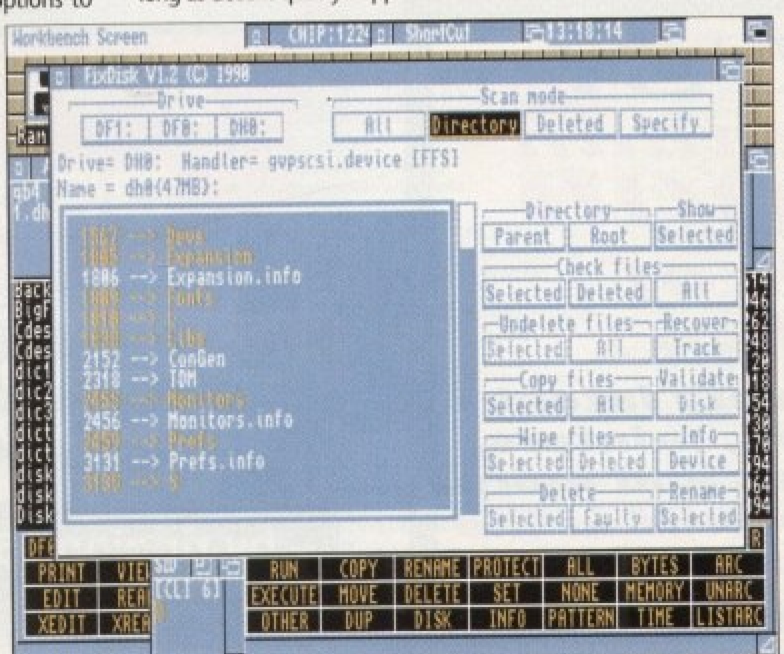
FixDisk works in a similar manner to QB Tools in that it carries out a scan of the drive you wish to repair. However, it has a "directory" mode, which is faster than the complete cylinder by cylinder check and is ideal for validation problems because it checks primarily for bitmap integrity and the more obvious faults.



KwickBackup does't look much, but it does the job well

When the problem is of a trickier nature, FixDisk will carry out a deeper scan, and can then pick up on the sort of faults QB Tools will sometimes miss. To be fair to QB Tools, there are occasions when it is the only resort after FixDisk has failed to sort things out, so I always use the two in tandem.

FixDisk isn't as user-friendly at first sight, but its buttons and scan options shouldn't put you off. You can scan for deleted files or a specified file, just as with QB Tools, delete files, recover deleted files, or rename them.



FixDisk can be a real saviour in times of need

Apart from this, and FixDisk's tendency sometimes to be a lot slower than QB Tools, the program is probably one of the most valuable and useful pieces of shareware a hard drive owner will ever purchase.

There are loads of shareware and PD hard drive backup programs around, many of which are available initially only in demo form. One, however, which has stood the test of time, and which can't be beaten on its bare bones approach, is KwikBackup. Though not as fast or effecient as QB4, it is easy to use and just as reliable.

Quarterback Tools and Quarterback 4 are both products of Central Coast Software, distributed in the UK by Silica Systems (081-309 1111). Prices: QB4 £54.95, QB Tools £69.95. FixDisk appeared on the March 1991 *Amiga Computing* CoverDisk and, with KwickBackup, should be available from all good PD libraries. Please be sure to pay the shareware donations if you use these programs.

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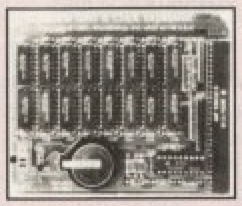


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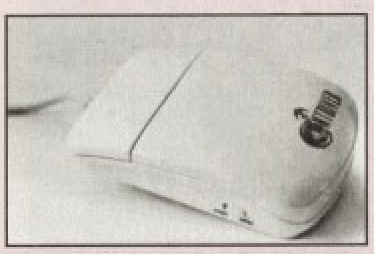
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Naughty but nice

Jonathan Maddock looks at GVP's tempting 8-Bit Digital Studio Sound sampler

Question: How do you make hit records without even getting out of bed in the morning?
Answer: Sampling.
Everybody does it, half the music world hates it and the other half couldn't survive without it. From George "I'd never use sampling" Michael to the absolute kings of sampling EMF, its use in the music business today is widespread.

Both of the above artists got in tremendous trouble over sampling – George for sampling James Brown's Funky Drummer and EMF for sampling Mark Chapman (the guy who killed John Lennon) reciting the lyrics to Watching the Wheels (a Lennon song).

EMF were told off because not only was their sample deemed to be in bad taste, but the John Lennon estate owns the copyright to Watching the Wheels. George Michael, on the other hand, was told to pay loads of money and give away a share of royalties to the offended. EMF also suffered the same fate and had to remove the sample from further pressings of the record, as well as sending a "sorry we didn't mean to do it" note to Yoko Ono.

So, this is the exciting world of sampling, where you can release hit records and get into loads and loads of trouble. But which sampler should you use?

There are numerous models on the market and the newest to join the family is GVP's 8-bit Digital Sound Studio. Inside the box there's a 3.5in white disk, a competent 175-page manual explaining everything you ever needed to know about sampling – but where's the sampler? It can't be in that tiny box, surely! It is, though – a midget thing that looks particularly attractive with lights and knobs plastered all over it.

To set it up, you simply plug it into the parallel port and connect a standard shielded audio cable between it and any mono or stereo sound source – I found that a CD player gave the best quality samples.

The best way to use almost any kind of sampling software is to boot it up and tinker around with it. Remember you can't do any damage to the hardware or software – although it is a good idea to read how to install the hardware and software first, or else you might find your toaster attached to the back of your Amiga and a crumpet in your disk drive.

The sampler is split up into three parts – the sampler itself, the editor and the highly useful tracker. Although there do seem to be a lot of functions and a hell of a lot of buttons and icons to confuse you, it is actually quite easy to use.

The sampler part is where you actually sample a sound, and is considerably less complex than the other modes. The input section is where you can determine whether DSS will sample the right, left or both input channels. So you can choose whether to have mono or razzama-tastic stereo samples. The monitor controls allow you to select from several different forms of screen display while monitoring and previewing a sound.

The first three options allow you to choose a continuous waveform display like that produced on an oscilloscope. The buttons allow you to select from three different scales of oscilloscopic readout. The other button activates the sonic spectral analysis display and shows you in real time the different frequencies from lowest to highest of the sound you are about to sample.

The rest of the buttons allow you to set the length of the sample to be recorded, the sampling rate, period and note. Trial and error is probably the best method for determining the appropriate settings for the sample rate.

Once you've got all your settings right, it's time to actually record the sample. You first click on the record button to enter the recording mode, then click the left mouse button to begin sampling, clicking it again to stop recording.

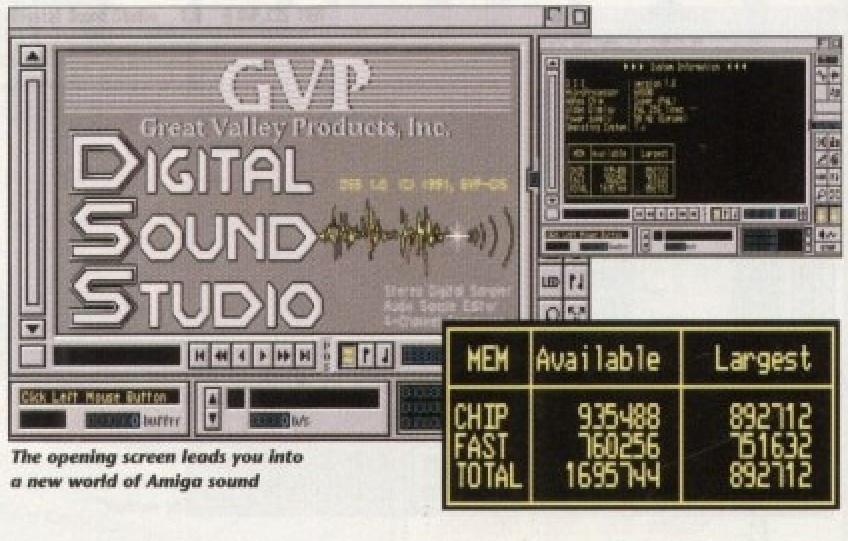
As soon as a recording has been completed, a requester will appear asking for a name for your sample. Christen it something and that's it – sampling completed. As you can see, recording is easy and really anyone can do it. Get granny on it right away – she'll love to sample a bit of Pavarotti!

The editor is divided into several sections – the display window, the slider controls, the editor function console and sample playback. These are the main functions, but there are others dotted around the screen as well.

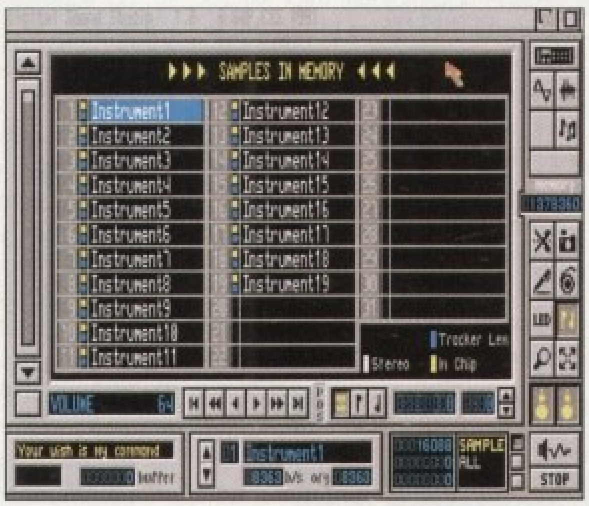
The display window is the principal workspace of DSS. The information presented in this window will depend on the mode that is currently active.

The sample list display screen is the main screen, containing 31 slots for the storage of samples. The samples appear by name in the numbered slots that comprise the list. A small index to the left of each sample name indicates whether the sample is in stereo, is currently loaded into chip memory and whether it is less than 128k in length. This index plays a major role in the tracker mode of DSS.

All manipulations that have to do with increasing and decreasing values are performed using the slider controls on the left edge of the editor screen. ➤

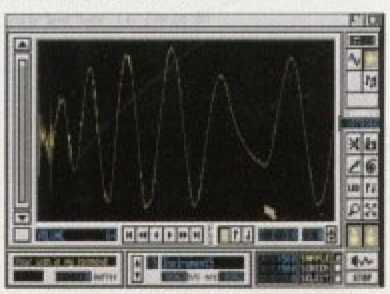


The opening screen leads you into a new world of Amiga sound



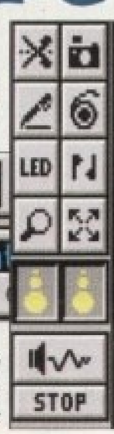


Those essential cvontrols at the heart of the system



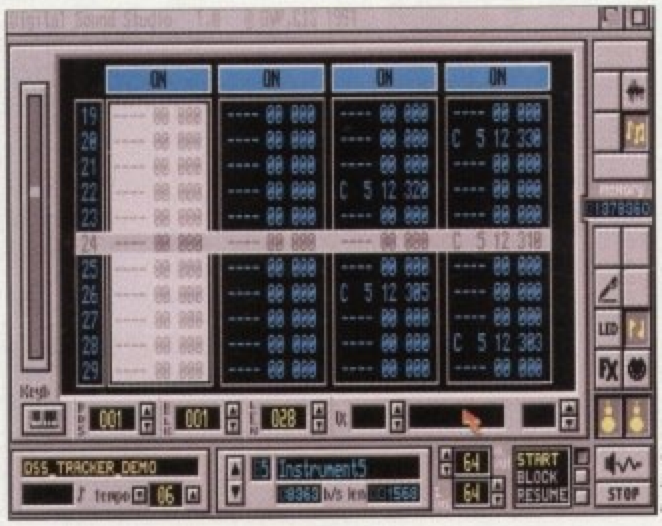
Watch those waveforms and avoid clipping your creations

Icons everywhere, a musos version of Dpaint





Easy to use tape deck and icon controls, things couldn't be simpler



GVP's very own Soundtracker clone in action

➤

The slider works like a typical AmigaDOS scroll bar.

The editor function console is full of gadgets and buttons arrayed down the right-hand column and across the bottom of the display window. The buttons allow you to edit or modify your sound samples. The basic functions are Cut, Copy and Paste. There is also a Draw mode which lets you use the mouse to manually modify the waveform onscreen.

Other functions include a low-pass filter which toggles the Amiga's internal filter on and off, Loop, which activates two loop markers allowing you to repeat or loop a specific section of the onscreen sample, and Magnify, which zooms in on the sample to make editing that tiny bit easier on the eyes.

Sample Playback, believe it or not, lets you play back samples. You can choose whether or not you want the sample played through the left, right or both channels. There are numerous other options, and it would take me forever to explain them all.

DSS's tracker is a four track sequencing program. For those of you who are less musically minded, a sequencer allows you to compose music without using classical notation. Looking rather like MED, the tracker is very easy to use and is ideal for the beginner.

The idea is that you sample an instrument – for example a drum beat – and then place it into the tracker. By using either the computer's keyboard or an external Midi keyboard you can play the various notes of the sample and, hopefully, compose a stunning hit record.

There are some rules, though, that you have to abide by when using samples. If the sample contains no looping segments, it can be no longer than 128k. The sample must also be mono, it needs to be loaded into chip RAM, and its sampling rate must not exceed 28,867 samples per second. Oh, and never, never feed it after midnight.

You can check that a sample is eligible by looking at its status in the samples list. The yellow marker indicates the chip RAM, the blue marker indicates whether the sample is less than 128k in size and the white marker indicates whether the it is in stereo.

In DSS, a maximum of four sounds can be played simultaneously – one from each of the Amiga's four audio channels. These four channels are represented as parallel vertical columns called tracks. A song is a sequence of consecutive and simultaneous notes which is what any normal person calls music.

Each individual note or sound occurrence is called an event. Events are grouped into blocks of 64 per track. These blocks can be arranged into a pattern or sequence – a song. The tracker also has lots of extra buttons and gadgets to mess around with. This versatility make DSS a joy to use – even after five minutes of use you feel like a "proper" musician.

The tracker is compatible with SoundTracker, NoiseTracker and SoundFx. Fancy making a demo of your top tunes? Well with DSS it's *no problemo* because you can write songs which are auto-executable. You can load the song using Workbench or CLI – now you can impress your chums with your mega-mixing!

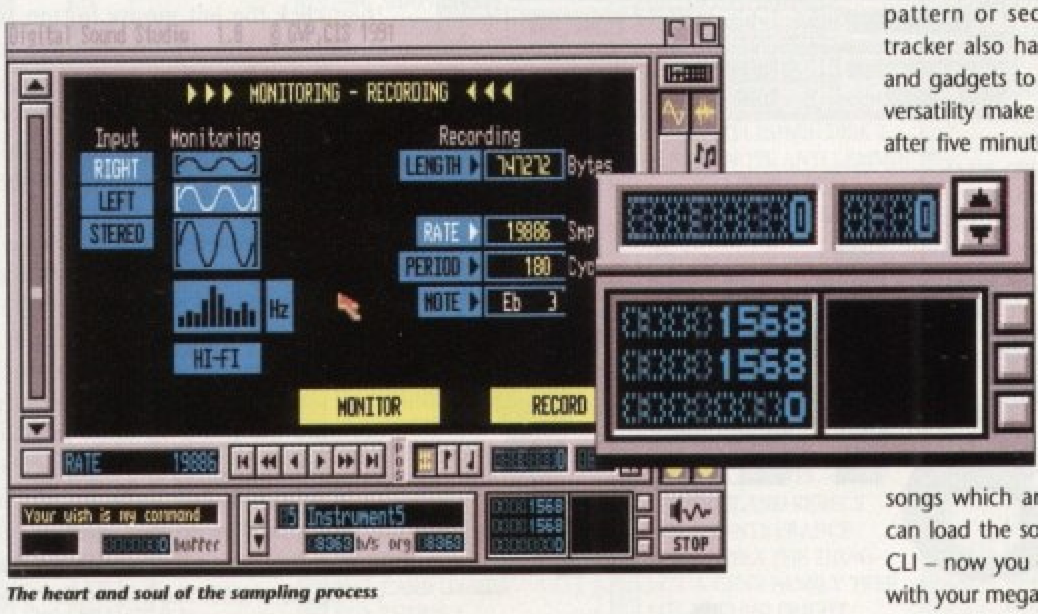
Overall, the general look and feel of DSS is excellent. It's got so many features and gadgets that you can quite easily find yourself engrossed in it from the moment you load it up.

The sound quality of recorded samples is particularly excellent – if the Pet Shop Boys had an Amiga they'd die for this sampler! Costing an incredible £59.95 including VAT and delivery, this is an excellent package which won't break your bank balance.

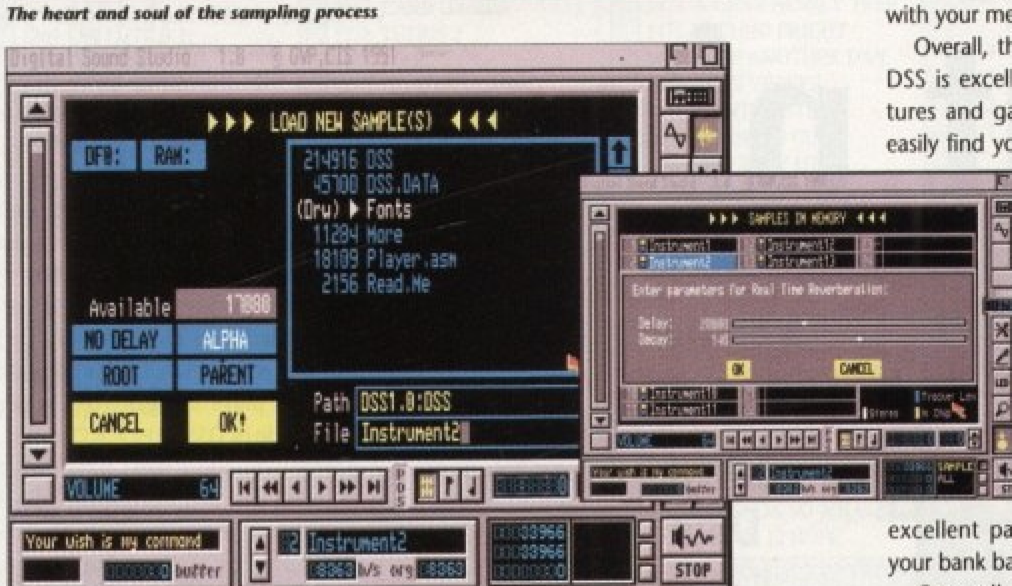
Generally I'm very impressed with this little goody. The only grudge I have against it is that the connecting leads are not supplied, so the absolute beginner would have purchase them separately.

This is a much more classy product than Stereo Master, reviewed last month – it's a "must buy" as far as I'm concerned. With a tracker built in to the package, it makes an ideal buy for anyone just dipping in to the Amiga music market.

Whether you are a seasoned musician or an absolute beginner, this package is definitely one to spend your Christmas money on. Remember, don't cry and write in to us when you get nicked for sampling – blame GVP for making it all so tempting.



The heart and soul of the sampling process



Importing your creations with the smooth ands simple on screen file requester

Garbage In, Garbage Out

For successful sampling, you must make sure you have a suitable sound source (like a CD player), because if you buy the product and then use a cheap tape recorder you won't be too impressed with the results.

If you do use a low quality source, you cannot blame the product for performing badly – I managed to achieve very impressive results when I was using it with a high quality source..



Digital Sound Studio is a product by GVP and is available from Silica Systems (081-309 1111). Price: £59.95 incl VAT and delivery

Ease of use

Implementation

Value for money

Overall

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£115
+VAT=£135.13 ref: PRI 2120

9 PIN PRINTERS



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192 CPS — 80 COLUMN

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- 8K Printer Buffer + 3 Fonts
- Parallel Interface
- Graphics Resolution: 240×240dpi
- Epson and IBM Emulation
- FREE Colour Kit
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Colour Option Extra - See Accessories

192 CPS — 136 COLUMN

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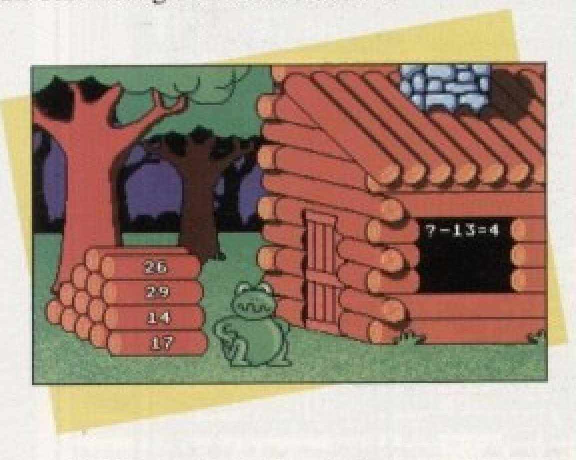


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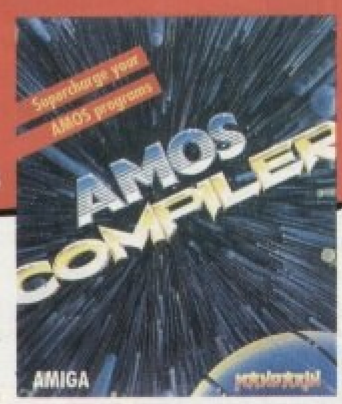
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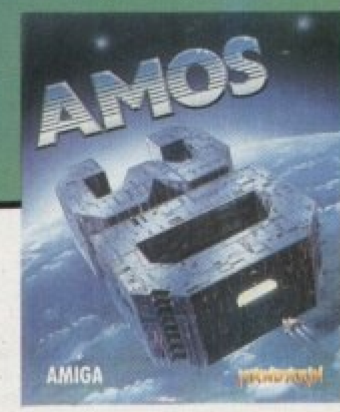


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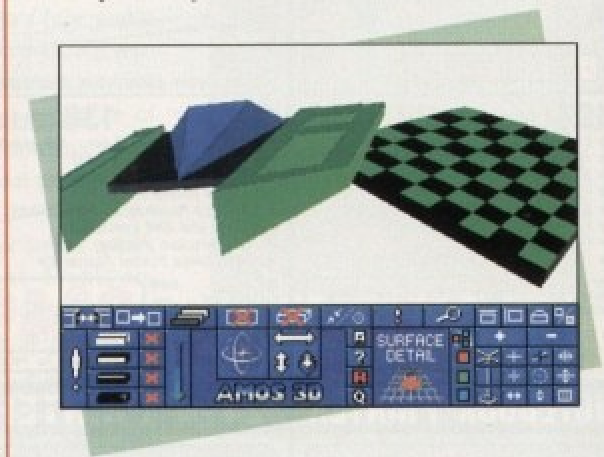
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1991, the big bang...

Read on as Paul Austin looks back at the year when the Amiga came of age and forward to the potential of '92

As little as 12 months ago the Amiga was still suffering from the ugly sister syndrome as far as serious DTV was concerned. As a result only a handful of professionals were using the Amiga for commercial video work. Now that's all changed...

Over the months our machine has cast off the chains of mediocrity and become an essential piece of hardware in both amateur and professional studios alike.

If you need proof, look no further than the Original Graphics Company, winners of this year's TV animation awards. They clinched the title thanks to their stunning animation sequences which appear weekly on the children's TV series Motor Mouth.

From now on, their award-winning creations will be coming straight from the heart of the Harlequin frame buffer, which as I'm sure you're aware is still the premier graphics board on the machine.

Although the Harlequin's position is safe for the moment, it could soon be challenged by a whole bunch of new boards which will soon be bidding for the top spot.

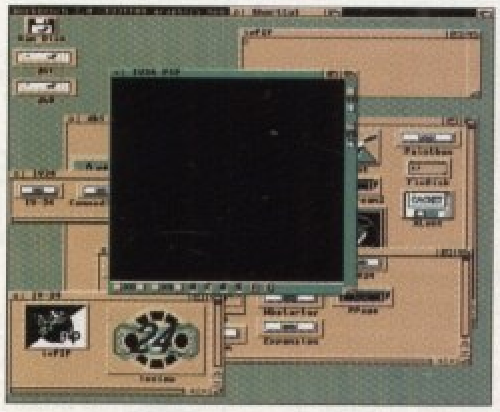
Progressive Peripherals are soon to release their highly acclaimed Rembrandt card in the UK. Likewise, G2 will enter the race at any moment with their VD2020. Both of the above are 32-bit cards as, of course, is the Harlequin.

To combat the ever-growing number of contenders, ACS have just announced the Harlequin+, which boasts a whole range of extra goodies including four extra screen modes, colour cycling, full screen overlay and increased buffering from two to six. Unfortunately there's still no option for frame grabbing.

The multimedia explosion

Second only to the impact of the 24-bit boards is the sudden proliferation of multimedia packages. At the forefront of these is the long awaited ShowMaker, which could be the answer to a DTV fan's dreams – especially if you're lucky enough to own a mountain of laserdiscs and various other high-end devices.

Another must for videophiles interested in a bit of multimedia is the inimitable Scala, which even in its present form has revolutionised Amiga presentation. Like Harlequin, Scala has recently gained a few opponents, primarily Presentation Master, which



we reviewed in its Gamma form last month, but which should arrive in its final form any day.

Aside from a software invasion, the world of multimedia is also having its fair share of hardware, primarily in the form of multi-function 24-bit boards such as the IV-24.

Genlocking, frame grabbing, picture in picture, Caligari, Scala and a paint package all in one bundle. Not bad for a board retailing at under £1,800. But be warned, the attendant software isn't quite as big a bargain as it first appears, because a rather heavy-handed software surgeon has been at work on the nether regions of both Caligari and Scala.

Editing made easy

Apart from patiently waiting for inspiration, perhaps the most painful part of any video-based creation is the editing. Once again a mixture of hardware and software has come to the rescue in the form of dedicated rock and roll editing systems such as VideoPilot, KRP's Timecode Editing System and the Editman system from Syntronix.

Thanks to these systems, the bad old days of stopwatches and Stanley knives are long gone. All you need now is a cheque book and a couple of compatible VCRs and you're away. Both the KRP and VideoPilot systems are frame accurate and employ their own designer timecodes which are written to the tape and read via the hardware/software combination in order to make the appropriate edits.



Improving your image

If there's one thing that's regularly neglected by the average enthusiast, it is the output quality when your creations are recorded on to tape. It can't be stressed enough that if you're serious about quality you need an PAL encoder.

Although it's possible to output direct from the good old modulator, the results are far from perfect. Unfortunately if you've never seen your creations at their best it's easy to carry on in blissful ignorance.

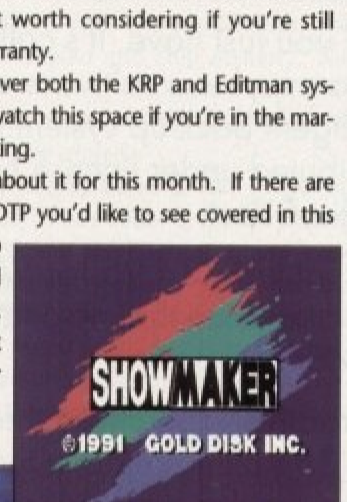
Those friendly folks at Third Coast Technologies can supply you with their CP-10 encoder for £149.99 or Syntronix systems can offer a whole range of encoders and other display enhancers which will cure almost any videographic ailment. For details of the Editman systems, telephone 0339 29899.

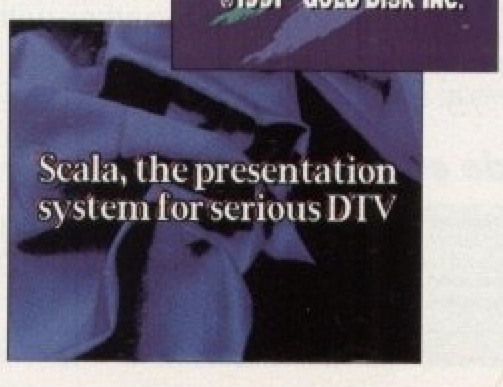
The Editman system is something of a mystery as far as edit control is concerned as it doesn't use a timecode, but still manages an impressive accuracy of +/– one frame.

All three systems employ remote control in one form or another. They function via programmable remote controls, apart from the KRP system, which only works with S-VHS hardware and requires some internal installation within the VCRs themselves. A point worth considering if you're still within your warranty.

I hope to cover both the KRP and Editman systems soon, so watch this space if you're in the market for easy editing.

Well, that's about it for this month. If there are any aspects of DTP you'd like to see covered in this column, drop me a line and let me know. Until next month, bye for now...





Cheaper alternatives

Although the high-end has blossomed, it's not only the power users who have benefited from the explosion. The once extortionate price of decent genlocks have also tumbled thanks to some cut-throat competition between the major suppliers.

Now even those of use in the cheap and cheerful league have access to near-broadcast quality equipment – and all for the paltry figure of around £100.

Once equipped with the hardware, all that's required is a copy of Dpaint for some essential artwork and perhaps a cheap titler. Some prime examples are Alternative Image's Big Alternative Scroller and *Home Titler*, which HB Marketing will happily supply. Both retail at under £50.

If you're willing to wait, it could be worth holding on for version two of the Alternative Image scroller which should be available at any moment and promises to have greatly enhanced effects plus smoother scrolling.

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Teaching the Amiga to sing

Get to grips with sound programming as Margaret Stanger continues her mini-series

This programming column is the second in a mini-series on sound. The first part showed how to produce a sound by writing to the Amiga custom chips directly with a pointer to the chosen sound samples. I'll now demonstrate how to vary the pitch of the sound and produce a few musical notes.

The Machine Code page of *Almanac* has been amalgamated with the Code Clinic page under the new title "Programming". Some C source code and some assembler may be shown in the text. The support disk will contain full programs with both C and Assembler source code, fully documented, as before.

All sound occurs in the form of oscillations in the air, or sound waves. On the Amiga the digital equivalent of a waveform is stored in memory as a series of digitised values or samples. This digitised data can be converted back to analogue form and sent to the amplifier.

The custom chip structure has four AudChannel structures. When they are written with parameters, the sound in the corresponding channel can be controlled. The sound change takes place when the corresponding bit in the DMA controller is enabled.

The ac_vol structure member determines the volume, from a minimum of 0 (silence) to a maximum of 64 (loud). The structure member *ac_ptr points to the start of the sound samples, and ac_len points to their length in words. Last month's Programming altered these two values to vary the timbre of the note. This month we concentrate on ac_per, the sample period, and its effect on the pitch of the sound.

Now read on

The frequency of the sound, or number of oscillations per second, determines whether the pitch sounds high or low. With each octave the frequency doubles – if middle C has a frequency of approximately 261.7Hz, the C above has a frequency of approximately 523.3Hz.

For the mathematicians among you, the frequency of each half tone is greater than the previous one by a factor of the twelfth root of two. A value of 440Hz for A was taken as the start for these calculations, so the values for most of the other notes contain rounding errors. The sampling rate, or number of samples read per second, determines how often a sample is sent to the digital/analogue converter. The frequency of the sound corresponds to the sampling rate divided by the number of samples per cycle.

The DMA controller needs to know the number of bus cycles between the output of two samples – this is known as the sample period. It can be calculated by dividing the inverse of the sample rate by the period of the bus cycle in seconds.

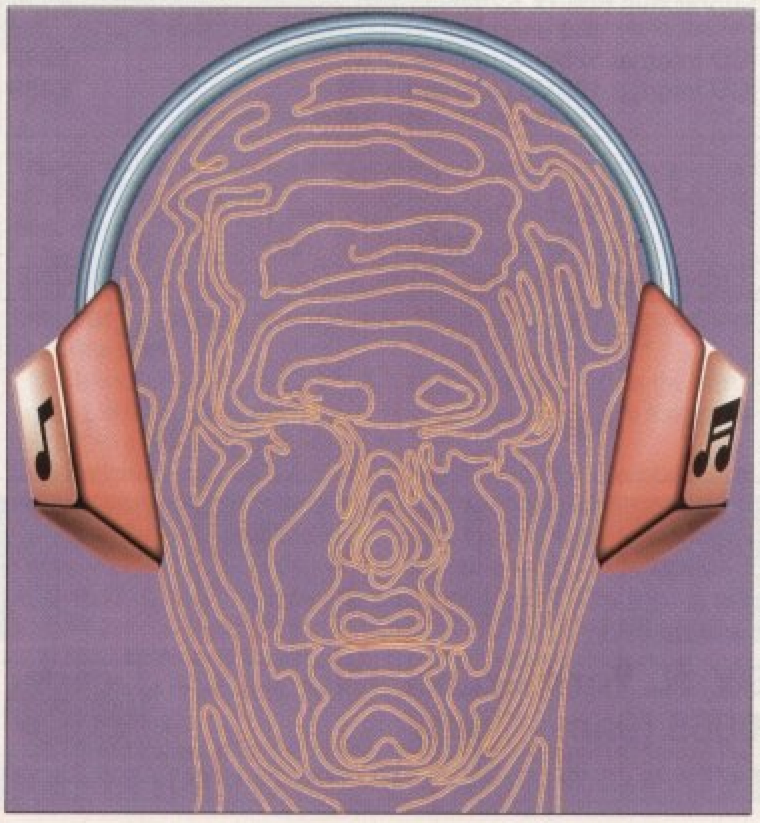
The sample period for the notes from middle C to top C have been calculated (but not by me), and here they are from the Assembler source code:

```
perval: period values c-c'
  dc.w 428,404,381,360,339,320,302
  dc.w 285,269,254,240,226,214
```

Mathematicians who like equations – and hard work – could calculate the values using the equations from page 175 in the *Amiga System Programmers' Guide.*

Hitting the high notes

To select a tone from another octave, and get the optimal sound, the same period values are used. The sample values are selected from a list obtained for that particular octave. The octave above would need half as many sound samples, the one below would need twice as many.



Sound sample files obtained by using a digitiser on a real sound, or from PD disks which contain sound samples, usually contain data for three or four octaves.

I have obtained higher octave data for the sine wave samples by only including one sample in two for the higher octave, and one sample in four for the highest octave. The sample length parameter (ac_len) also needs altering when the octave is changed.

When the end of the data is reached, one sound cycle has been performed, and an interrupt will occur. The Amiga will continue with more sound cycles until the channel is disabled. In this program, each sound is turned off at the end of one second.

The Amiga may be in the middle of a sound cycle when this happens, and the sound will not turn off smoothly. The sound starts and ends smoothly only when the sound is at the beginning or end of a sound cycle, and the current sample is zero.

The system software can detect the generated interrupt, and can be used to turn the sound channel off when the sound cycle is finished, or when the correct number of sound cycles has been completed. The system can inform us when this has happened, and when there is no more sound queueing up for the channel.

This leaves the program free to concentrate on other things, and I will demonstrate this technique in the next Programming.

The program

The two programs, sound2.a and sound2.c are almost identical – one (soundc2.c) is compiled from C source code, and the other (sound2.a) is assembled from assembler source code.

Each program opens the DOS library and allocates chip memory for the sound data. The sound data is copied into chip memory. The sound channel 0 DMA is disabled each time adjustments are made and the parameters for AudChannel[0] are altered.

A sound is created based on the sine wave data, with a pitch of middle C. Similar sounds are made with the same samples, and each sound is pitched one semitone higher than the last one. A higher octave is produced using the same series of period values, but using the waveform_oct2 samples. These samples are constructed from the original by using only alternate samples.

Samples for a third octave are created by only using one in four of the original samples. The program releases the memory, closes the library, and exits gracefully.

COMING SOON: My next two Programming pages will involve sound channel control using a MessagePort, and simple music. Both C and Assembler will be supported.

Amiga music in '91

The last year has been an interesting one for the Amiga. Paul Austin looks back at some of the highs and lows and glimpses at what awaits in '92

The longest running story of the past year has to be the demise of the long-suffering sequencing package MusicX. Claims and counter-claims bounced across the Atlantic either proclaiming the continuing health of the Amiga's musical monarch or swearing that the king was dead and the truth was being withheld from the people.

In reality, the latter is more accurate. The Amiga's musical messiah has indeed bitten the big one. Even though Micro Illusions are keeping tight-lipped about its untimely end, it is official that the development team has been disbanded.

As any developer will tell you, once the support team are in the bin the software can't be far behind. The real shame about the MusicX story is that if supported by either modules or upgrades the package could still be ruling the roost, not by being the best, but simply via the huge user base it captured in the early days.

Pretenders to the throne

As MusicX drew its final breath, the software vultures wasted no time in grasping their chance. At the forefront of the feeding frenzy were Zone Distribution. They wasted no time and went straight for the throat with their latest version 1.3 of KCS.

Not content to pick the bones of MusicX, they're offering across the board reductions on all of the Amiga's sequencing packages, defunct or otherwise. If you're willing to trade in an old versions of KCS, MusicX, Sequencer1, Bars and Pipes, Pro 24 or in fact any serious package, Zone will give reductions that in certain cases reach triple figures.



The new age

While we wipe a tear in loving memory of programs of the past, let's console ourselves with what's coming in the new year. The most notable forthcoming event has to be the imminent UK release of the new SunRise Industries sound card collection.

Like Bars and Pipes Pro, the two Sunrise cards have been on the press release circuit for some time, but at last they've arrived in Europe. As a result you can rest assured that *AC* will bring you the definitive review as soon as the postman delivers.

The hardware comes in either 12- or 16-bit format. The 12-bit version is aimed squarely at DTV, while its bigger brother takes on the big boys in the CD quality studio market.

As you can imagine, even 16 megabytes of a fully configured A3000 doesn't go too far when you're dealing with hardware that can operate at rates of up to 100kHz. As a result, all the information is written direct to hard disk and read back as the sample plays.

Now we in the Amiga world can benefit from the sound quality that both the ST and Apple Mac have enjoyed for some time. Both boards come with their very own control software and, of course, are compatible with SMPTE timecode.

The only worrying point is whether the boards will work with a stereo signal. Initial reports suggest that the 12-bit board is mono only. If this also applies to the 16-bit version, its studio potential may well be seriously impaired.

A spokesmen from Sunrise assured me that both boards will be winging their way across the Atlantic within two weeks, so I should be able to give the answer to this question, and no doubt countless others, in the next issue of *AC*. Watch this space...

Cheap and cheerful

For the vast majority of users, the prospect of shelling out £200 plus isn't exactly a daily event. As a result the rise and fall of power packages isn't really earth-shattering news. On the other hand, a brand new sampler or perhaps the latest in editing software is far more interesting.

For the low-down on the samplers, dig out the October issue of *AC*, and if you're after what I consider to be the premier editing program have a look at the November issue. Hidden within its glossy folds you'll find Audition4 – a must for serious samplers.

Rising stars

The year started promisingly, thanks primarily to Gajits Music Software's release of Sequencer1. Although considerably underpowered in comparison to the likes of KCS and Bars and Pipes Pro, it did, and still does, fill a niche in the market.

For those Amiga musos who want to get their creations onto disk without the fiddling and complexity of the power programs, it's ideal. Unfortunately, the initial promise of upgrades and further enhancements has not yet been honoured, even though version two of the software was promised before the end of the year.

In defence of Gadjits, they have released other products such as the latest version of The Hit Kit composition software which allows you to take the Lego approach to song construction, by building entire songs from a variety of component parts.

The original version was bundled with Sequencer1 but, no doubt due to its popularity, version two is now sold as a product in its own right, retailing at around £30.

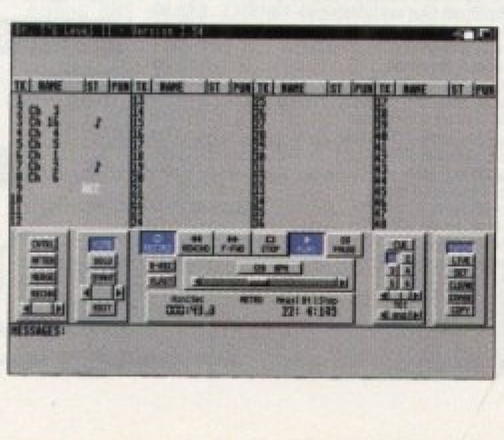
Their second, and latest, release is a series of high quality box set samples which give you access to the sounds of high price synths which can then be used in any Soundtracker clone.

As MusicX suffered its lingering death, Bars and Pipes Pro had the opposite problem. Although widely available in the States, its European releases has been rumoured and argued over for the last six months.

At last it has finally arrived thanks to Zone Distribution, a company which is slowly beginning to dominate the Amiga music scene. For more details on B&P Pro catch the excellent review elsewhere in the mag, plug...plug...

Well, that's about it for this month. Next month's column will feature the SunRise selection, plus all the news from the world of Amiga music.





Reading between the lines

An offline mail reader can save you money and improve your image! Stewart C Russell is our man with the impeccably-constructed messages

Last month I looked at the Fido mail points, which is the most efficient way of handling large amounts of messages. This month, because several of you asked about it, I'm investigating offline mail readers.

OLRs allow you to use a BBS as normal for file up/downloading, but mail is received as a compressed packet to be digested offline. The next time you log on, you can upload your replies in one shot, without having to wander through all the mail areas.

The main reason for using an OLR is time saving. Cutting your online time not only saves you money, but it allows more users to access the BBS. Additionally, composing messages offline is considerably less stressful than hammering away as the phone bill tots up. Offline messages tend to be neat and, for the most part, intelligible. In short, OLRs are a good idea.

This being real life, there is a snag. Not every bulletin board supports OLRs – most do these days. The main problem is that there are quite a few different file formats for mail packages, depending on the bulletin board. There are at least four different mail formats, and of course they are all incompatible.

The board I use, Alba Maximus (041-880 7863, v22bis, 24 hours), supports several offline reader file formats. Most importantly, it will read and write the QWK Quick Mail format, which is supported by a couple of Amiga OLRs, Amiga-Reader and MessageView.

Setting up an OLR is easy – it's meant to be, in order to encourage users to install them. After dearchiving the program to get it into a runnable state, you may have to create a few directories and make a couple of Assigns, as noted in the documentation.

You'll also have to dig out a selection of dearchiving tools, for some boards offer very few methods of archiving your mail. The most disastrous option is a board which only offers Zip archiving – the Amiga Zip program is very large and doesn't accept command line parameters. More enlightened boards – such as Alba Maximus – will offer Lharc or LHA archives, both of which can be handled by the excellent LZ 1.92 program from Jonathan Forbes. Steer clear of ARJ – although it gives better compression than LHA, there is only a decompress routine for it at time of writing.

Now log on to your board in the usual way, and select the offline reader option from the main menu. The first session will take a while, since you have to tell the BBS the settings you intend to use. These include download protocol, archive method, and of course the mail areas you want to look at.

After that, the mail program will wander off collecting your messages, and then will proceed to archive them. Here you hope that the machine at the other end is quite fast, since file compression can be slow. Alba Maximus runs on a fairly nippy PC, so even LHA compression is done in seconds.

Auto Z-Modem download (as featured in NComm and JR-Comm) is very useful here, as most mailers can be set to send the mail packet, then automatically logoff. Maybe it's just me, but I never feel happy leaving an auto-logoff session to its own devices, for I'm sure the download will fail, or somehow be re-routed via Chiguayante, Chile.

The difficult bit's done. Just point your OLR at the mail archive, and let it grind at it until something sensible appears. Have a browse, reply to a few with your favourite editor, create some messages – take your time, enjoy modern automatic mail reading at its best. Once you're done, let the program create and archive the mail reply packet, ready for your next call. The best place to look for OLRs is an Amiga-specific board, mainly because they tend to be better clued up on the Amiga's needs than PC based systems.

I tried both Amiga-Reader and MessageView – both were adequate, but Reader is small and difficult, while MV is huge (over 200K!) and is limited to two message areas in its evaluation release. Other readers for different systems include Bundle OLR and AmigaXRS, both very capable programs for their respective systems.

Ask other users of your local board if they use an OLR – failing that, the sysop should know of one. If that doesn't turn one up, have a dig on Amiga Information (details later) or one of the other large boards. Failing that, you could always ask in the AMIGA_UK echo, where someone will definitely know where to look.

Rip off!

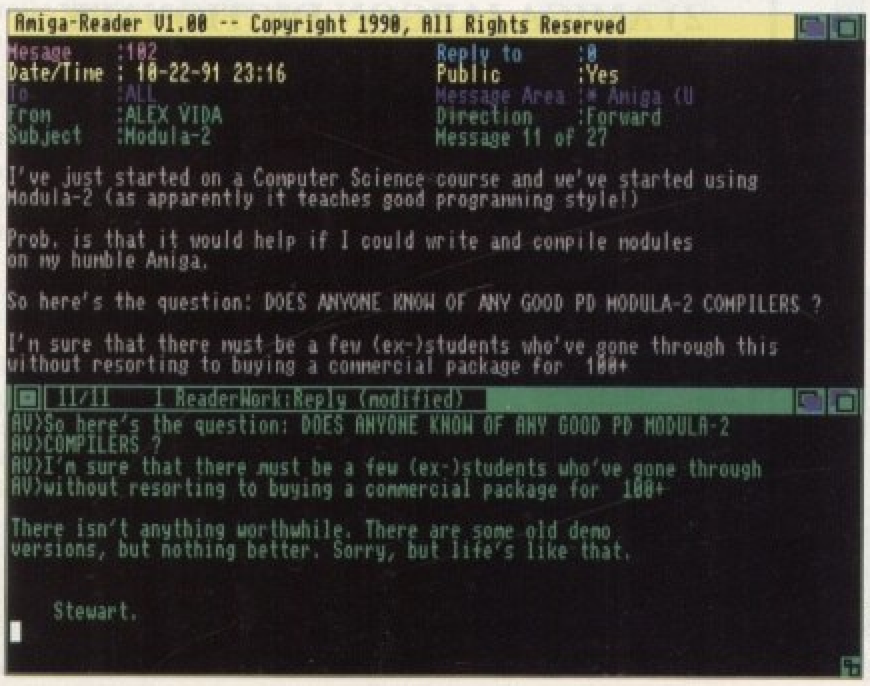
To close, I thought I'd just mention something that made me mad. Not so long ago, an advertisement went round some of the UK Fido echoes for a BBS which has (and I quote) "...100 MEGS OF FILES FOR *YOU* ... FULL MESSAGING FACILITIES FOR *YOU*".

That's not unusual. What was strange and worrying was the phone number, which was phrased something like this: 08 3936 XXXX. Odd number that – bet you're wondering where that one is. Rearrange it, and you get 0839 36XXXX; that's right, a 36p/48p per minute "nice little earner" line.

What really flames me off is that the sysop was trying to make out that the board was especially big, with wonderful messaging services. An 100 meg file area is virtually *de rigueur* these days, and most boards support private Matrix mail at minimal cost.

If you don't believe me, look up Nick Lello's Amiga Information (0444-441308, HST 24 hours). Nick imports and exports files via the ADS network, a global distribution system for Amiga BBS sysops. Offline reading is supported (via Bundle2) and all the usual mail facilities are there.

Nick and the rest of the sysop breed are the true salt of the earth, giving time and money for an exceptionally generous hobby. Don't let the money-grabbers corrupt the BBS spirit!



Amiga-Reader: light on memory, but difficult to use

Stewart C Russell can be contacted on CIX as scruss, or is available at FidoNet 2:259/2.4 (off Alba Maximus, Glasgow).

Ghost rider

Peter Hickman shows how to introduce meanies into your AMOS games

As you will recall, we have now generated our maze and made a Pacman travel around it with our joysticks – now it's time to introduce a nice ghostie to chase you.

Some of the code we will be looking at will be familiar to you, but there are subtle differences between the program we looked at in the last issue and this one.

First we open our screens and reserve our bank to store the maze data. Then we load in the sprites and icons:

```
Reserve As Work 10,240
Screen Open 0,320,200,16,Lowres
Flash Off @l = Curs Off
Cls 0
Hide On
'
Load "PACMAN_SPRITES.ABK"
Load "MAZE_ICONS.ABK"
Get Icon Palette
```

Note that most of the code is now in separate procedures. This is to keep matters a little clearer when explaining things. As you write your own programs you will find it much more efficient to break them down into smaller, more manageable parts. This means that all of our variables must be declared as Global – if we do not do this, our procedures will not recognise them!

The next step is to generate the maze and execute the main loop.

```
MAKE_MAZE @l = Repeat @l = Wait 2
```

Right, because we have changed things a little, the program now checks the joystick and moves our Pacman by calling two procedures.

```
CHECK_STICK @l = DO_PACMAN
```

Because our ghost is moving quite quickly we need to weight the odds in our favour a little. To do this we will use a variable counter called PASS. Every time the loop is executed we increment this variable, and when it reaches three we move the ghost. So for every three moves we could make, the ghost will make one:

```
If PASS=3 @l =  DO_GHOST @l = End If @l = Add
PASS,1,1 To 3
```

Finally, we will check to see if the ghost has hit the Pacman by comparing their co-ordinates. BX & BY are the ghost's position, X & Y are the Pacman's position in the maze:

```
Until(BX=X and BY=Y)
End
```

The next procedure is the one which makes the ghost so hard to beat. Remember how a couple of issues ago we looked at baddie intelligence? This program uses exactly the same method and follows these rules:

```
        1] IF PACMAN IS LEFT OF GHOST THEN MOVE
GHOST LEFT
        ELSE MOVE GHOST RIGHT
        2] IF PACMAN IS ABOVE GHOST THEN MOVE
GHOST UP
        ELSE MOVE GHOST DOWN
```

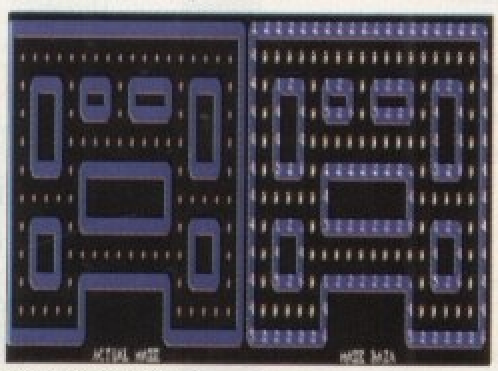
Of course, if a wall is in the way the Pacman cannot move. You can easily overcome this by introducing more complex rules. Remember – baddie intelligence is always governed by a set of rules, simple or complex:

```
Procedure DO_GHOST
If BX<>X
 GHOST_RIGHT
Else
 If BX>X
  GHOST_LEFT
 End If
End If
If BY>Y
 GHOST_UP
Else
 If BY<>Y
  GHOST_DOWN
 End If
End If
Bob 2,16*BX,16*BY,4
End Proc
```

The following procedures check to see if a wall is in the way before moving the ghost. Any value found in the maze bank other than eight is classified as a wall. In more complex versions of the game you could check for power pellets, bonus fruits, and so on:

```
Procedure GHOST_LEFT
B_LEFT=(BY*20)+(BX-1)
If Peek(Start(10)+B_LEFT)=8
 Dec BX
End If
End Proc
Procedure GHOST_RIGHT
B_RIGHT=(BY*20)+(BX+1)
If Peek(Start(10)+B_RIGHT)=8
 Inc BX
End If
End Proc
Procedure GHOST_UP
B_UP=((BY-1)*20)+BX
If Peek(Start(10)+B_UP)=8
 Dec BY
End If
End Proc
Procedure GHOST_DOWN
B_DOWN=((BY+1)*20)+BX
If Peek(Start(10)+B_DOWN)=8
 Inc BY
End If
End Proc
```

CHECK_STICK looks at the value stored in JOY(1). This contains a bitmap of the joystick position. If the value found is one it means that you are pushing the joystick up, two means down, four is left and eight is right. Just for reference, if the value of 16 is found then you have pressed Fire on the joystick!



The maze and its data

```
Procedure CHECK_STICK
WAY=Joy(1)
If WAY<>>0
 If WAY=1 and Peek(Start(10)+UP)=8
  EAT_DOT
  Dec Y
 End If
 If WAY=2 and Peek(Start(10)+DOWN)=8
  EAT_DOT
  Inc Y
 End If
 If WAY=4 and Peek(Start(10)+LEFT)=8
  EAT_DOT
  Dec X
 End If
 If WAY=8 and Peek(Start(10)+RIGHT)=8
  EAT_DOT
  Inc X
 End If
End If
End Proc
```

This procedure does exactly the same as the routine we looked at last month. Basically it looks at the four directions surrounding the Pacman to discover if a wall is in the way. It stores this information in the global variables UP, DOWN, LEFT, RIGHT:

```
Procedure DO_PACMAN
UP=((Y-1)*20)+X
DOWN=((Y+1)*20)+X
LEFT=(Y*20)+(X-1)
RIGHT=(Y*20)+(X+1)
Bob 1,16*X,16*Y,2
End Proc
```

The next procedure does, guess what? Yes it erases the dot!

```
Procedure EAT_DOT
Cls 0,X*16+6,Y*16+6 To X*16+12,Y*16+12
End Proc
```

Finally comes the procedure to generate the maze, which we looked at in depth a couple of issues ago.

```
Procedure MAKE_MAZE
For LOP=0 To 11
 Read MAZE$
 '
 For LOP2=0 To 20
  BLOCK=Val(Mid$(MAZE$,LOP2+1,1))
  POSITION=Start(10)+(LOP*20)+LOP2
  '
  Poke POSITION,BLOCK
  '
 Next LOP2
Next LOP
'
For LOP=0 To 11
 For LOP2=0 To 19
  BLOCK=Peek(Start(10)+(LOP*20)+LOP2)
  If BLOCK<>>0
   Paste Icon LOP2*16,LOP*16,BLOCK
  End If
 Next LOP2
Next LOP
Wait Vbl
Double Buffer
'
Data "12222222222222222223"
Data ...
```

Well, that's it for now. Why don't you try to add a scoring system, or some more ghosts?

Next time we'll look at the program from scratch to see what we can translate into AMAL, the excellent sub-language which zooms along...

More on style

Ben Pointer continues his tour of Professional Page tags

Last month we dealt with the Tag Name and Paragraph sections of Professional Page's Define New Style Tag requester – this month we'll deal with the rest of it.

We can skip over the the gadgets for colour, font and size because they are self-explanatory. The three line spacing buttons, however, need explanation.

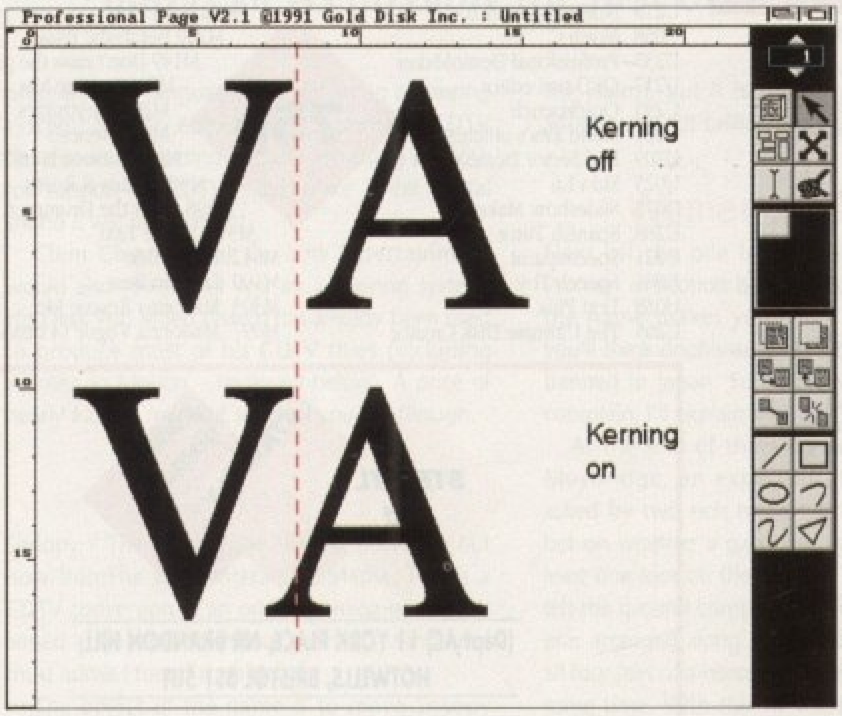
If you choose fixed line spacing, then the distance you enter (in points) will be the space between the baselines of your text, no matter what the point size is. So if you have 12pt text and specify six points of fixed line spacing, each line of text will overlay the line above it by six points, making it totally unreadable. To get two points of white space between each line you would have to enter 14 as your fixed line spacing distance.

Relative line spacing is the best way to ensure that the space between lines of text is a large enough to make text of that point size readable. It defaults to 120 per cent, so if your text is in 10pt the space between baselines is set to 12pt, and if your text is 15pt the space between baselines is set to 18pt. In general, the larger the point size, the more space is required between lines for good readability, so relative line spacing automates this design decision.

Leading is the amount of white space between the bottom of one line and the top of the line below it. In theory, a distance of zero points of leading – a technique known as "setting solid" – means that the descenders of the line above will touch the ascenders of the line below.

In practice, typefaces are generally designed with a small amount of white space below descenders so you can set your text solid and get away with it – many newspapers do this because it gives the page a "busy" look.

As suggested by the default relative line spacing figure, a leading distance of 20 per cent more than the point size of the text is generally the best distance for good readability – 15pt text with 1pt of leading will look cramped and sometimes cause readers to begin to read the same line twice, while 10pt text with 5pt of leading will be too spaced out causing readers to pause at the end of every line while their eyes and brains travel to the beginning of the next.



Kerning is something you will almost always want switched on. Notice how the A tucks itself neatly under the V

So the three line spacing buttons are just three different ways of doing the same thing. Choose whichever one you feel most comfortable with, and stick to it.

In the middle of the requester is the Justify button. This has two settings – on or off. It's impossible to have no justification, so don't fall into the mistake of thinking that this is what "off" means. It doesn't. It means that the style of justification for the text will be copied from the text that directly precedes the text that is being tagged – no change in justification, in other words. If this confuses you, simply switch justification on and click the style of your choice – that way no accidents can happen.

Over to the right of the requester is a column of eight buttons separated into two groups of four. The top two buttons, Tracking and Baseline Shift, are simple on/off toggles and have associated string gadgets into which you enter the amounts of each.

Tracking is specified in hundredths of an em (one em is simply the width of a lower case "m" in that font) and you can enter a negative number if you like – useful with large point sizes. Baseline Shift is entered in points – a positive number moves the baseline up, a negative number moves it down.

As with the Justify button, if Tracking and Baseline Shift are turned off then the settings are copied from those of the text directly preceding the tagged text.

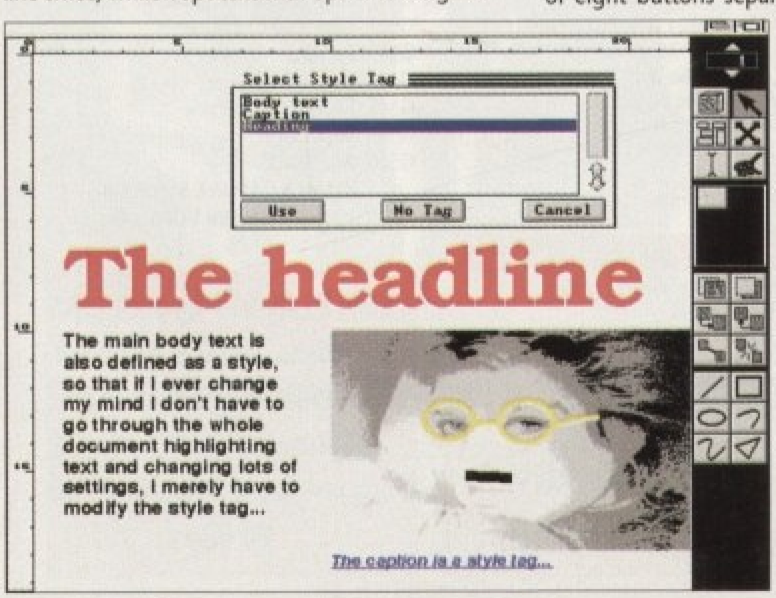
The next two buttons, Kerning and Hyphenation, have three settings – a black square in the button means it is turned on, a cross through the square means it is turned off, an empty white square means no change (that is, copy the settings from the text preceding the tagged text).

Kerning is the feature whereby certain pairs of characters fit snugly together. For instance, in the character pair VA the left-hand upright of the A fits itself neatly into the space created by the right-hand upright of the V.

On the whole kerning is deeply desirable and you should always have this switched on unless you have increased the tracking of some text, in which case trying to kern pairs of characters is pointless. On the other hand, hyphenation is not desirable – from a readability point of view, at least.

The last four buttons are text format toggles - on, off and no change. I advise you to set them to exactly what you want, on or off in other words, otherwise you might find a bold or italic style being carried forward from the preceding text.

Well, that just about wraps up Professional Page style tags. Spend some hours experimenting with all the features – from a design and time point of view, using them is really worthwhile.



If you set up all the text elements of your document as separate style tags, global changes can be made quickly and easily at the click of a button or two

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U266 Wordwright
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Art or pornography?

Jolyon Ralph rounds up the latest CDTV offerings, and reviews possibly the first over 18's disk

More CDTV add-ons are now available. Commodore are producing a black keyboard for CDTV (£49.95), a remote trackball (£69.95) with keypad and a cordless infra red mouse (£49.95). These should be available from all CDTV dealers by the time you read this.

Announced but not yet available are the new AVM (Advanced Video Mode) card and the hard disk options.

The AVM card is a CDTV version of the DCTV (not to be confused) add-on for the Amiga which gives 24-bit television quality graphics on the CDTV. The price has not been finalised, but is expected to be under £50.

The hard disk options include the 20 to 100Mb internal drives I reported on last month, and a standard SCSI interface card for external drives. These are only available to developers at the moment – I have one and it works very well – but Commodore say they will probably be selling them to the public eventually.

The CDTV will soon have more support in the authoring system department. Authoring systems, if you don't already know, are multimedia packages that allow people with little or no programming knowledge to put together applications for CDTV. This means faster, easier and eventually cheaper CDTV titles for everyone.

Digital Vision, publishers of InfoChannel and the excellent Scala package have announced Scala for CDTV. This will allow people to produce simple CDTV applications very quickly, and if it is as easy to use as the original Scala, everyone should be able to use it.

Mandarin Software are producing a version of AMOS for CDTV programmers. While AMOS is a programming language rather than an authoring system, it is so easy to use that many CDTV developers (including myself) are using it. With full support for CDTV features like 16-bit digital sound it will be excellent.

Clem Chambers at On-Line Entertainment would also like to sell you an authoring system. His Desk Top Video system has already been used to produce most of his CDTV titles (including Women in Motion – reviewed below). A price of nearly £2,000 may put some of you off, though.

Snoopy

Snoopy – The Case of the Missing Blanket is out now fromThe Edge Interactive Media. This is a CDTV conversion of an original Amiga game. It is aimed at children from four years up, although I must admit I found it quite fun.

The object of the game is to move Snoopy around and find various objects that will help him complete his task, which in this case is finding Linus' blanket, which has been lost. It is the usual sort of run around and collect things type of game, although I use the term "run" loosely, as Snoopy moves tediously slowly.

I found it annoying, but my eight-year-old brother who was testing the game with me didn't mind it too much. The puzzles are not too difficult (although my brother did get so frustrated that he threw the remote control across the room), but it is still fun. Overall we liked Snoopy. It's not brilliant, but it's quite fun.

Women in Motion

Next off the pile is the suspiciously named Women in Motion by On-Line Entertainment. If the name makes you think "hmmmm" then you'll think doubly so when you hear that it was banned in Japan. So before you all write in to complain, I'll explain a bit more.

At the end of the 19th century, Eadweard Muybridge, an expert in photography, was asked by two rich horse enthusiasts to settle a bet on whether a galloping horse always had at least one foot on the ground, or whether it ever left the ground completely. With a string of cameras arranged along a race track he proved that all four feet of a horse do leave the ground at the same time. With this he invented moving photography and the cinema.

During his later work he spent time photographing nude women in motion (hmmm...). His pioneering work in documenting human movement was vital to the work of animators like Walt Disney, and is a standard text for art students.

Now, with all his work on CDTV, his pictures can be viewed frame-by-frame, or as an animation. The files are all stored as IFF pictures and anims which can be loaded into Deluxe Paint III or similar programs – assuming you can transfer the files from your CDTV to your Amiga.

The user interface isn't brilliant – you have to move a mouse pointer around the screen with the remote control keys. It's usable, but it could have been a lot better, and it seems to spend a large amount of time loading files.

It's interesting to see titles like this on the market. No doubt some people will buy the disk for the women rather than the motion, but art students in particular will find this very useful.



Hmmmmm...

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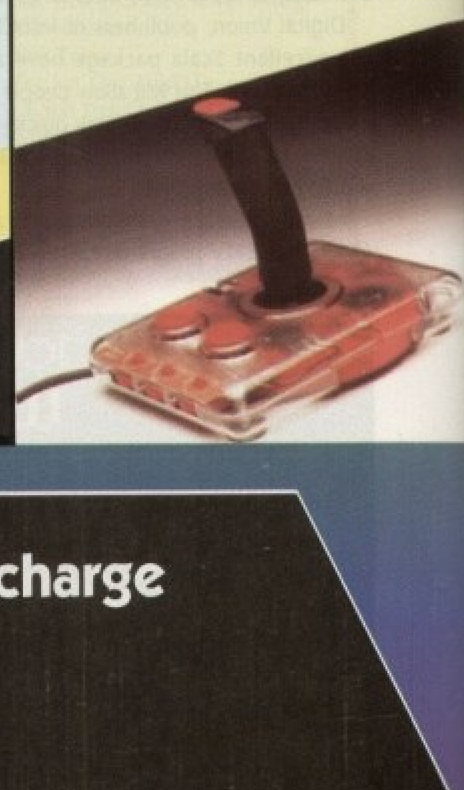
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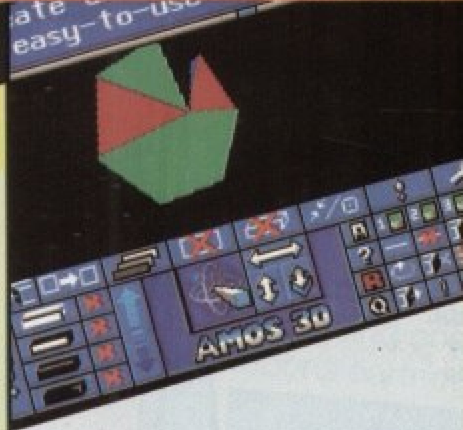
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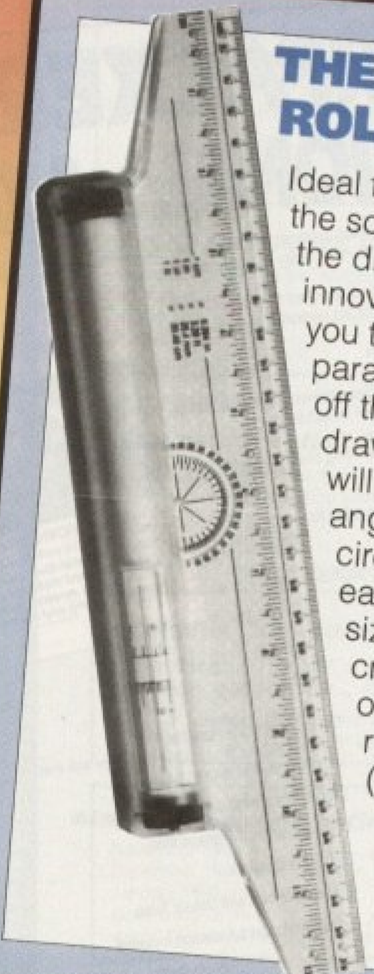
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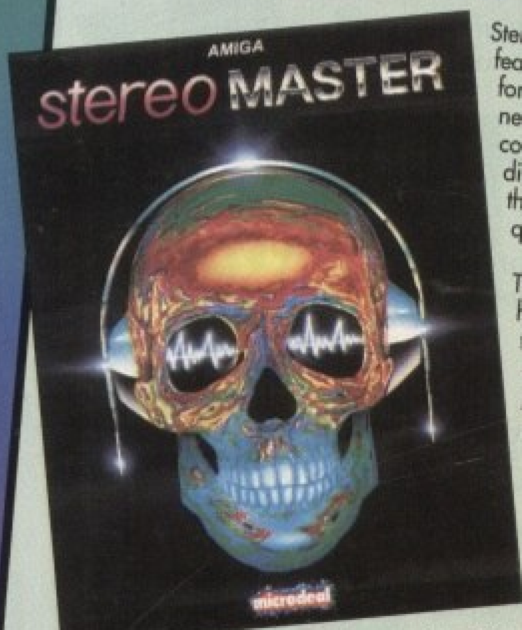
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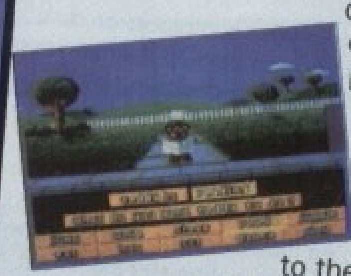
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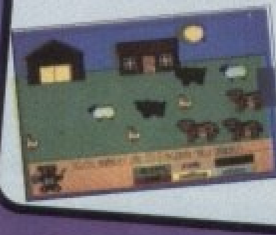


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AMC 2

Drop your joystick, switch off your monitor, slip into something more comfortable and relax with some extra entertainment, courtesy of *Amiga Computing*'s very own critic Antony Purvis

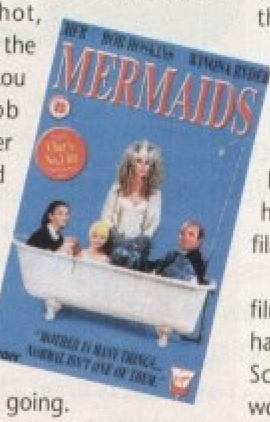
ENTERTAINMENT XTRA SELL-THRU' SATELLITE CINEMA

MERMAIDS

MCEG Virgin Vision (Out January 8)

Meet Mrs Flax (Cher), an eccentric single parent who has a nasty habit of moving house every time a romantic affair doesn't work out. Say hello to Charlotte, Mrs Flax's eldest daughter who wants to become a nun (despite the family being Jewish) and also to the nine-year-old Kate, the youngest of the family.

Consider the calendar rather helpfully left in shot, proudly displaying the year 1963. Meet Lou Landsky (Bob Hoskins), the owner of a shoe shop, and witness the blossoming love affair between himself and Mrs Flax (Still Cher).



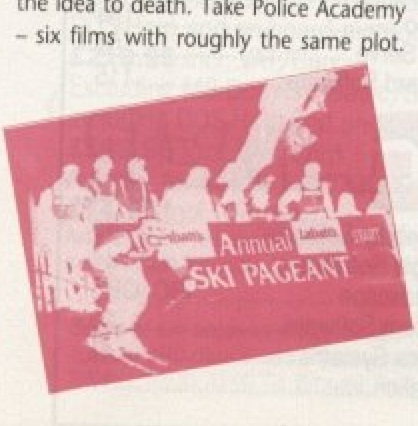
Mermaids as a film is fairly easy going. Very little happens, taking 105 minutes to do so, and it isn't long before you start to wonder exactly what there is about this film that made it the box office smash that it was.

While I gave Mermaids my full attention, it didn't seem to return the compliment. As a film it's not intrinsically bad but it certainly is not overtly entertaining. For my part, I could see the smallest glimmer of something in Mermaids, but as a whole this is a film that comes perilously close to not being worth renting, reinforcing my beliefs that some films succeed more because of publicity inertia than anything else.

SKI SCHOOL

First Independent (Out Now)

It's true to say that there are only so many ideas under the sun. Therefore, when you get an idea that works, you roll with it. Unless you're a Hollywood film producer, in which case you flog the idea to death. Take Police Academy – six films with roughly the same plot.



Rental newbies

The producers of Police Academy produced a film called Ski Patrol, which turned out to be no more than one of the least unfunny Police Academy films set on a mountain.

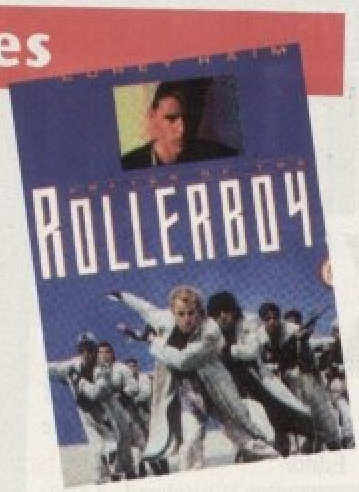
Enter Ski School, a remarkably similar film both in title and content. Just because a film isn't remotely original does not mean it isn't any good, though. Ski School is the traditional story of rival gangs at some form of educational establishment. One group is bad, nasty, evil and despicable and uses every dirty trick in the book. One group is good, incredibly hip and stylish, and by the end of the film comes out best.

Ski School is not the most original film that you'll rent this month, but it has to be said that, unlike Ski Patrol, Ski School is very funny and is definitely worth watching. Lots of humour of the "Parker Lewis Can't Lose" variety, and some stunning photography and stunt action. Original it is not, but enjoyable and worth renting it most definitely is.

PRAYER OF THE ROLLERBOYS

First Independent (Out January 15)

It is the future (again)... America is in a state of ecological and financial collapse. Betrayed by the greed of their parents, the children of America fill the homeless camps to capacity. In this 21st century Max Headroom-type scenario, a powerful new force is emerging. That force is the Rollerboys, a gang of violent thugs who blaze through the city on skates known as Rollerblades. Ruled by the inspiring Gary Lee (Christopher Collett), they are the force of the future, running protection and drug rackets, with the goal of "buying back America".



Two orphaned survivors of this society are Griffin (Corey Haim) and his younger brother Miltie. When he discovers that Miltie has been recruited and is selling and using the super-drug "Mist", he agrees to infiltrate the neo-fascist Rollerboys operation when approached by the police.

With just one notable exception, I've always been very impressed with Corey Haim's movies, and Prayer of the Rollerboys is no exception. It, like the others too numerous to mention, is a top-notch wedge of entertainment for the youthful masses.

I can confidently recommend this film as one of this month's better rental releases – a good 90 minutes of entertainment. I doubt that there'll be many films released in January to beat this and Ski School.

9½ NINJAS

MCEG Virgin Vision (Out January 22)

Someone tells you they're releasing a new video.

"Excellent," you tell the company, "kindly forward one review copy of said video cassette in order that it may be reviewed by myself and the results published for the masses to consume." (Uh oh, Mr Logic alert! – Ed) The people on the phone consider your request, and the reply comes forth: "I'm sorry, there are no review copies of this title available."

Only two conclusions can be drawn from Virgin's failure to send anyone a copy of this video to review. Number one is that the video contains vital coded information as to the whereabouts of the Spanish Armada.

Number two is that possibly the video is so earth-shatteringly bad that they're going to let the punters rent the film and find out for themselves how naff it is, instead of letting a reviewer put them off renting it in the first place.

9½ Ninjas might be a very good film. But as no-one will let me see it, I can't tell you if it is.

It could be very naff indeed, and you might be advised to think twice before you rent it.

Sky's silver screen selection

The pick of Sky's Movie channels in January

Don Bluth's animated film All Dogs Go To Heaven gets more screenings on The Movie Channel this month, as does Honey, I Shrunk The Kids, and the Kevin Costner movie Revenge. Rutger Hauer makes an appearance in Blind Fury, the tale of a chap who's a bit handy at martial arts yet is as blind as a bat. (Not that bats are blind – this is a fallacy that I do not want to be a part of, thank you very much.)

Madonna keeps up to her usual movie appearance standard in the intensely naff Bloodhounds of Broadway, a film you are advised not to watch unless you enjoy bad films. A rather better film, namely The Fabulous Baker Boys gets some more screenings in January. Luke out (ha ha! a joke!) for Lukas Haas in The Witches on Sky Movies Plus. While primarily for the kids, it has some stunning visual effects from Jim Henson and a small role for Rowan Atkinson. More screenings for Troop Beverly Hills, Uncle Buck, and David Lynch's deeply odd and confusing Wild At Heart. There'll also be some more screenings of Nuns On The Run, with Robbie Coltrane and Eric Idle, and Pretty Woman with Richard Gere and Julia Roberts starring will also be one to look out for.

Premières this month include Clean And Sober, starring Michael Keaton. This did well when it was out on rental video last year, so is likely to be worth a look. Finally, don't miss Arnold Schwarzenegger, the man of a thousand "Steve Wright in the Afternoon" sketches, in the première of Total Recall, the tale of a man who has his mind stolen (I know just how he feels...).

Rock Lobster

FINAL — THE AMIGA COMPUTING TEAM CHILL OUT ★★★★

WHOOPS!

LAST month we experienced a few seasonal production problems with your very own *Lobster*.

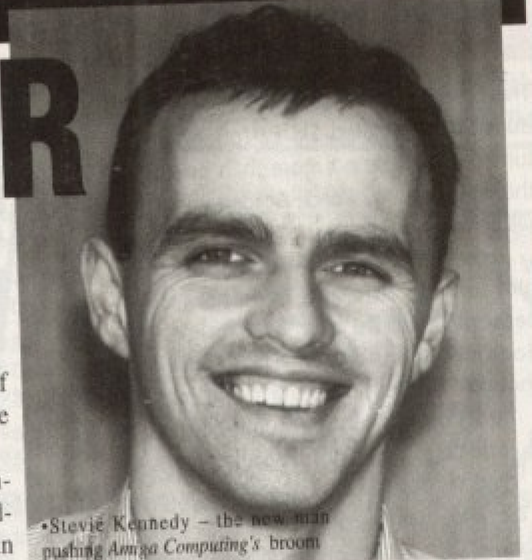
In particular an article called "Our survey said" was unreadable in some regional editions.

We have now ironed out these production glitches and apologise for any inconvenience caused to our readers.

• NEXT MONTH: "Those glitches" – the inside story

LATE NEWS EXCLUSIVE

NEW EDITOR SHOCKER!



•Stevie Kennedy – the new man pushing *Amiga Computing's* broom

SENIOR management at leading computer magazine *Amiga Computing* have confirmed exclusively to Rock Lobster that a new editor has been appointed.

Stevie Kennedy has taken over from Eddie McKendrick with immediate effect.

This shock move is thought to be the end result of a long running dispute between McKendrick and *Amiga Computing's* letters editor Ezra Surf.

A jubilant Surf commented: "Eddie never really understood me, I have known Stevie for over three years and I'm sure he will do a good job."

Kennedy, 26 was previously technical editor of the magazine and is thought to have a good understanding of the Amiga.

Other changes at *Amiga Computing* include the appointment of a new games editor and the promotion of Paul Austin to Associate Editor

Daniel Whitehead, a confirmed hit with *Gamer* readers, takes over from Julian Boardman who is leaving the magazine to "pursue other interests" at *ST Action* magazine.

Newly appointed editor-in-chief, Eddie McKendrick commented: "I don't know what all the fuss is about – anybody would think that Ezra Surf runs the magazines."

As we go to press it is unclear what changes Kennedy's new broom will sweep into *Amiga Computing* – although it is thought unlikely that the popular "Ezra Surf' Postbox" column is under any immediate threat. More details as we get them.

NEXT MONTH

The next issue of *Amiga Computing* hits the shelves on Thursday 6th February, 1992.

WIN!

75 Berol disk label pens must be won!

YOU'RE ALWAYS ON A WINNER WITH Rock Lobster

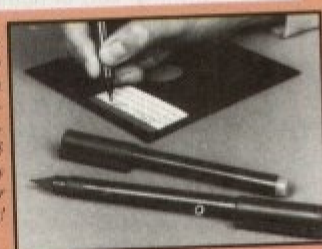
THANKS to *Rock Lobster* 75 lucky readers can win an innovative disk pen from Berol.

These special pens allow you to write on disk labels without damaging the disks (hardly a problem with 3.5" disks! – Ed)

To win one, simply estimate how many meters one of these pens can write for. Is it: *(a) 250 m (b) 25 m or (c) 2,500 m.*

The first 75 lucky readers to send the correct answer will each win one of these superb writing utensils. Send entries to: 2,500m *Pen Compo, Rock Lobster, Amiga Computing, Europa House, Adlington Park, Macclesfield SK10 4NP*

• The ingenious Floppy disk pen from Berol. – It's a give-away to 75 lucky Lobster readers!



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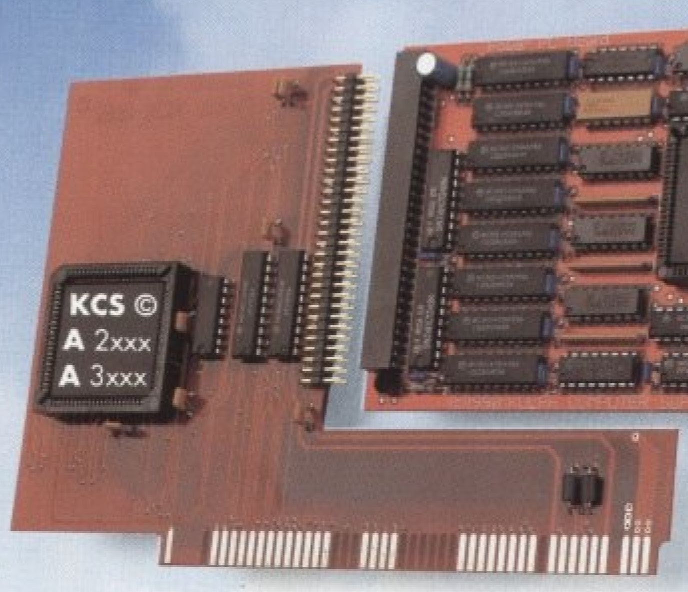
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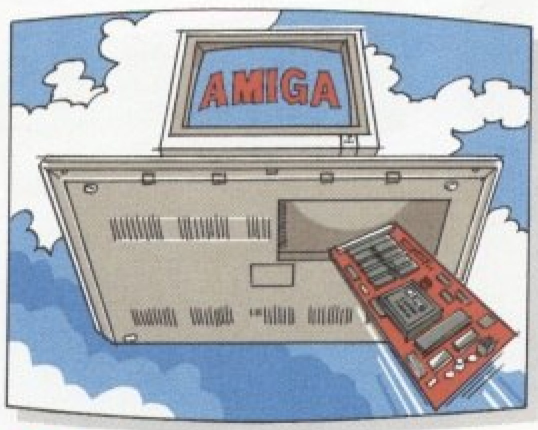
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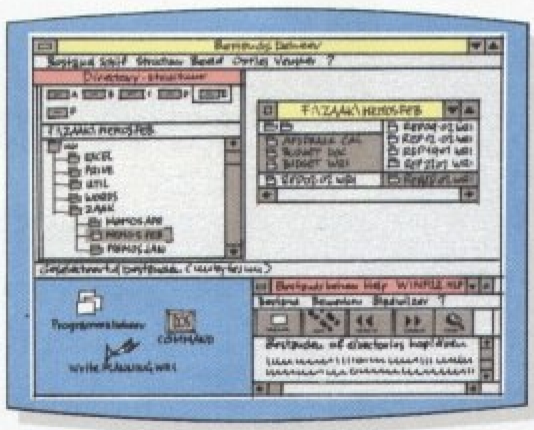
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Including MS-Dos 4.01/GW Basic/Shell/DOS-Help and on-board memory.
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VISA

Access

Compatibility is excellent but no-one can guarantee every single program available, therefore if your purchase depends on a particular program, please ask us first or send in a copy of the program. (With suitable S.A.E. if to be returned). Price subject to change without notice.

Wholly developed and produced in the Netherlands

Some of our importers Worldwide:
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Images can now be grabbed from either colour video camera, home VCR or in fact any still video source. The traditional method of holding three colour filters in front of your video camera is certainly a thing of the past. Because Vidi splits the RGB colours electronically there are no focussing or movement problems experienced by some of our slower competitors. Lighting is also less of an issue as light is not being shut out by lens filters. Put all this together with an already proven Vidi-Amiga/VidiChrome combination and achieve what is probably the most consistant and accurate high quality 4096 colour images ever seen on the Amiga.

The colour solution is fully compatible with all Amiga's from a standard A500 to the ultimate A3000. No additional RAM is required to get up and running.

You will see from independant review comments that we are undoubtedly their first choice and that was before the complete solution was launched. If you have just purchased your Amiga and are not sure what to buy next, then just read the comments or send for full review and demo disk.



Actual unretouched digitised screenshot

Features ...

- Grab mono images from any video source
- Capture colour images from any still video source.
- Digitise up to 16 mono frames on a 1meg Amiga.
- Animate 16 shade images at different speeds.
- Create windows in both mono & colour.
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- Add text or draw within art package.

Amiga Computing: The best Amiga digitiser has had the technicolour treatment. Vidi must be one of the most exciting peripherals you can buy for your Amiga.

Micro Mart: When I first saw Vidi "in the flesh" as it were, at the CES show last September it looked to be the answer to a frustrated Digi View owner's dreams – in fact to see pictures appearing on screen without the customary two minues wait seemed almost too good to be true. I have consistently produced more good quality pictures in the short time I have had Vidi than I ever did with Digiview.

Zero: Now under normal circumstances cheap usually means poor quality but this is not the case with Rombo. Why? cos Vidi-Amiga is the best digitiser for under £500 and I've tried them all.

Amiga Format: Where quality is concerned, Vidi produces some of the best results I've seen on any digitiser at any price.

Amiga User International: The latest addition to the Rombokit is called Vidi-RGB and brings this already impressive package to the realms of totally amazing. CONCLUSION: Who will find Vidi-Amiga useful? The answer to this is almost anyone with a video recorder or camera and a passing interest in graphics.



ROMBO Limited

Full colour demonstration disk available for only £1.95 to cover P&P.

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